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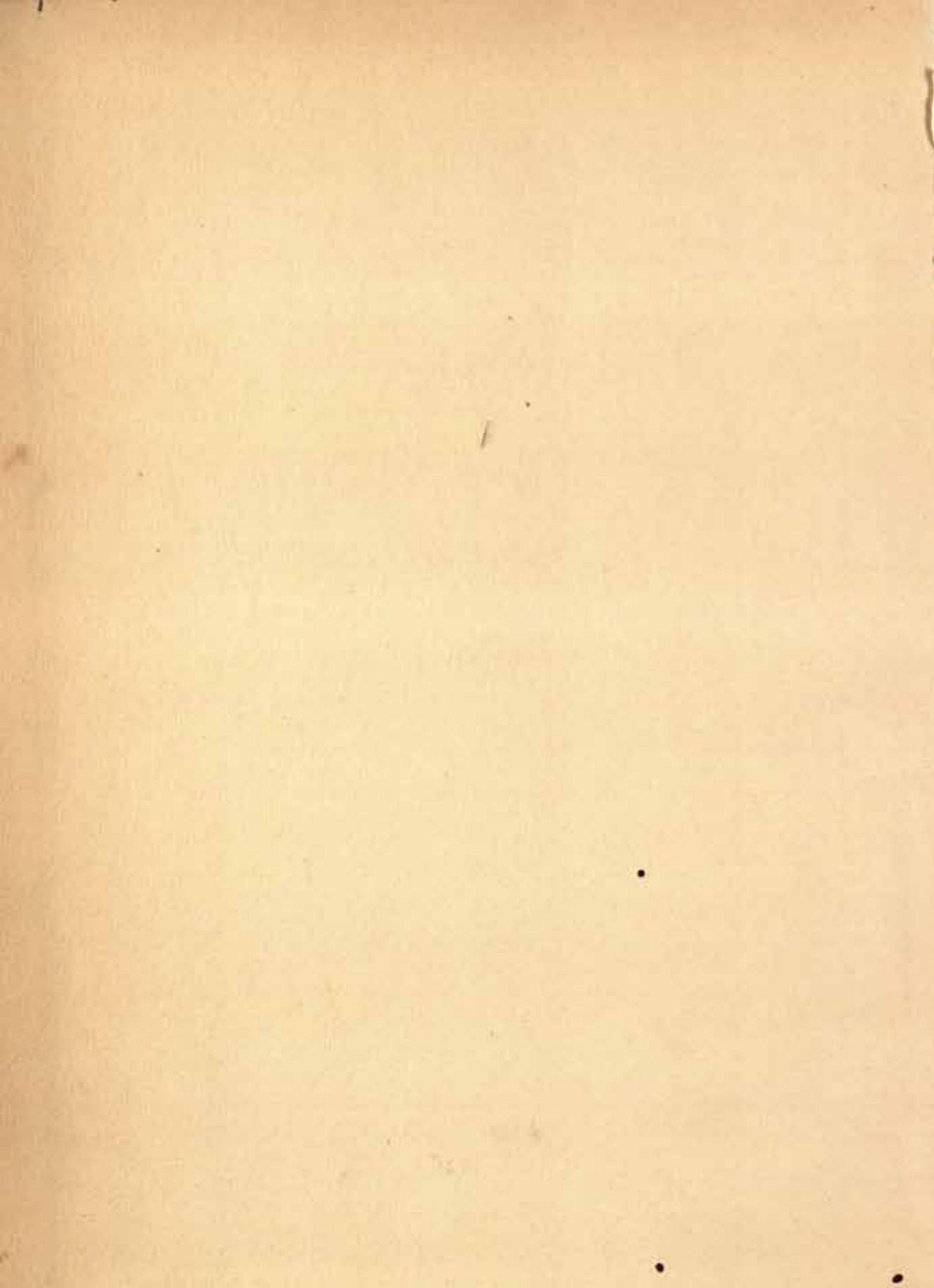
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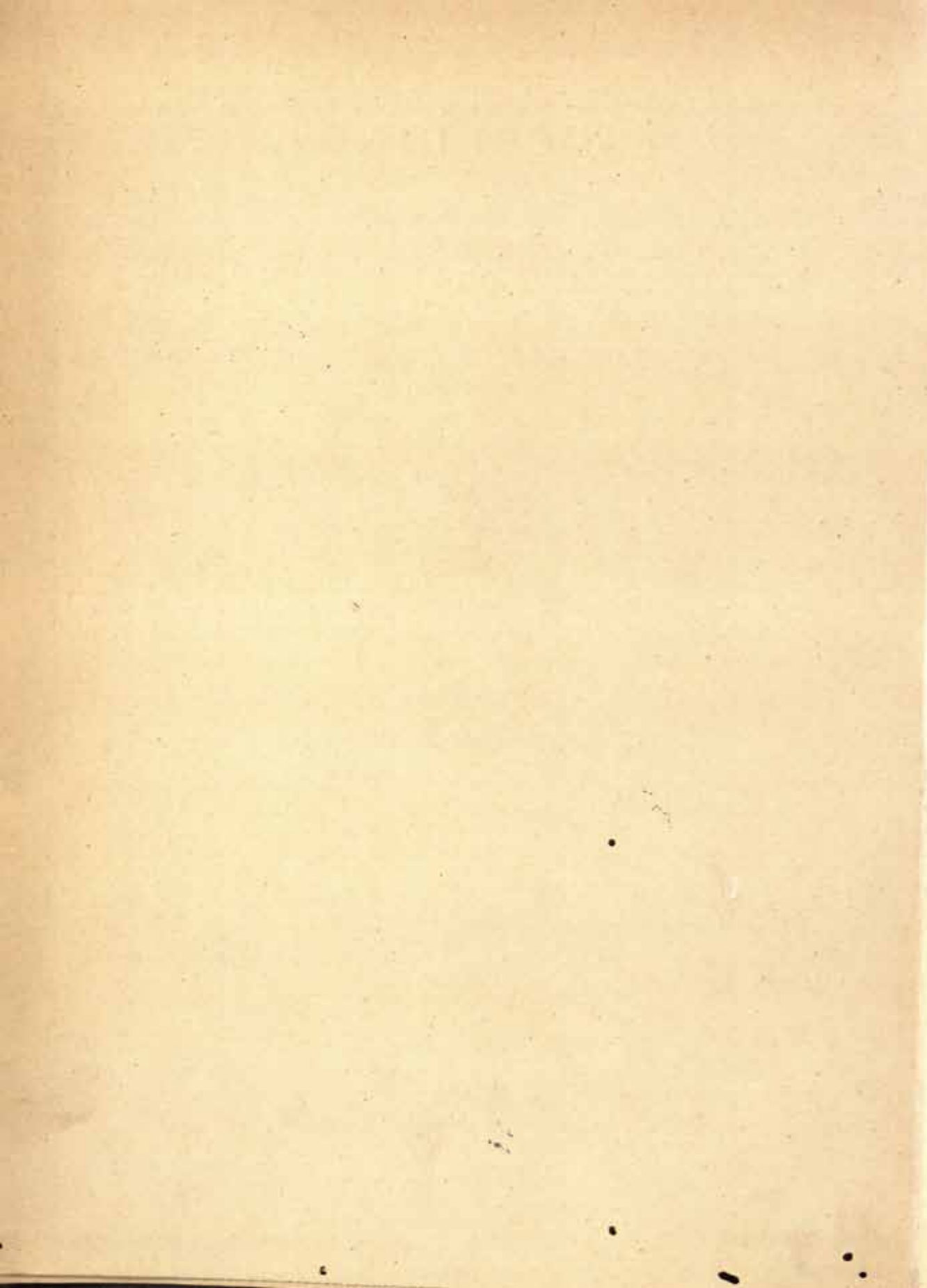


PROCEEDINGS
OF THE
Society of Antiquaries of Scotland



A260

No 16/25



PROCEEDINGS

OF THE

Society of Antiquaries of Scotland

SESSION
MCMXXIII.-MCMXXIV.



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P. S. A. S.

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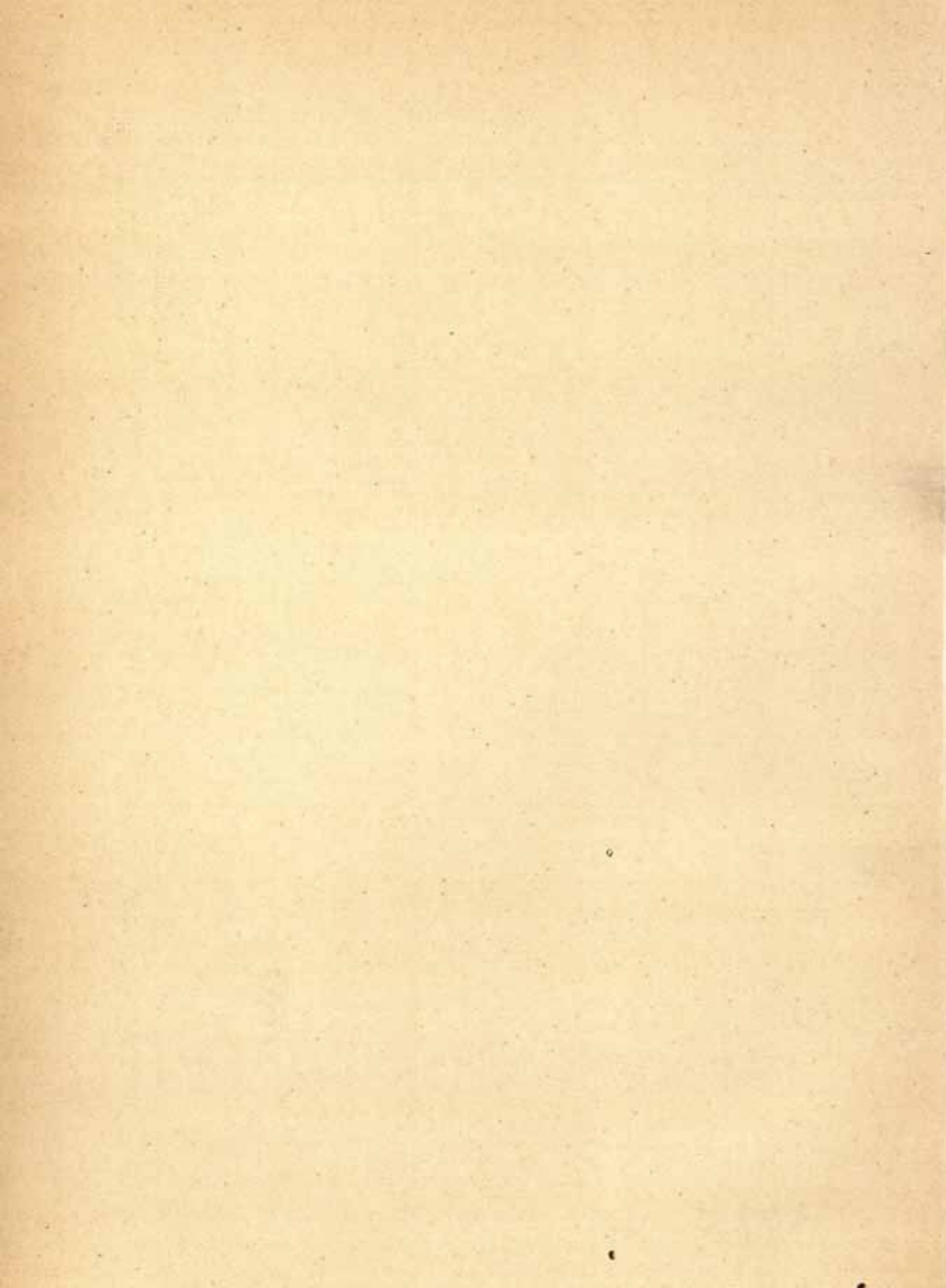
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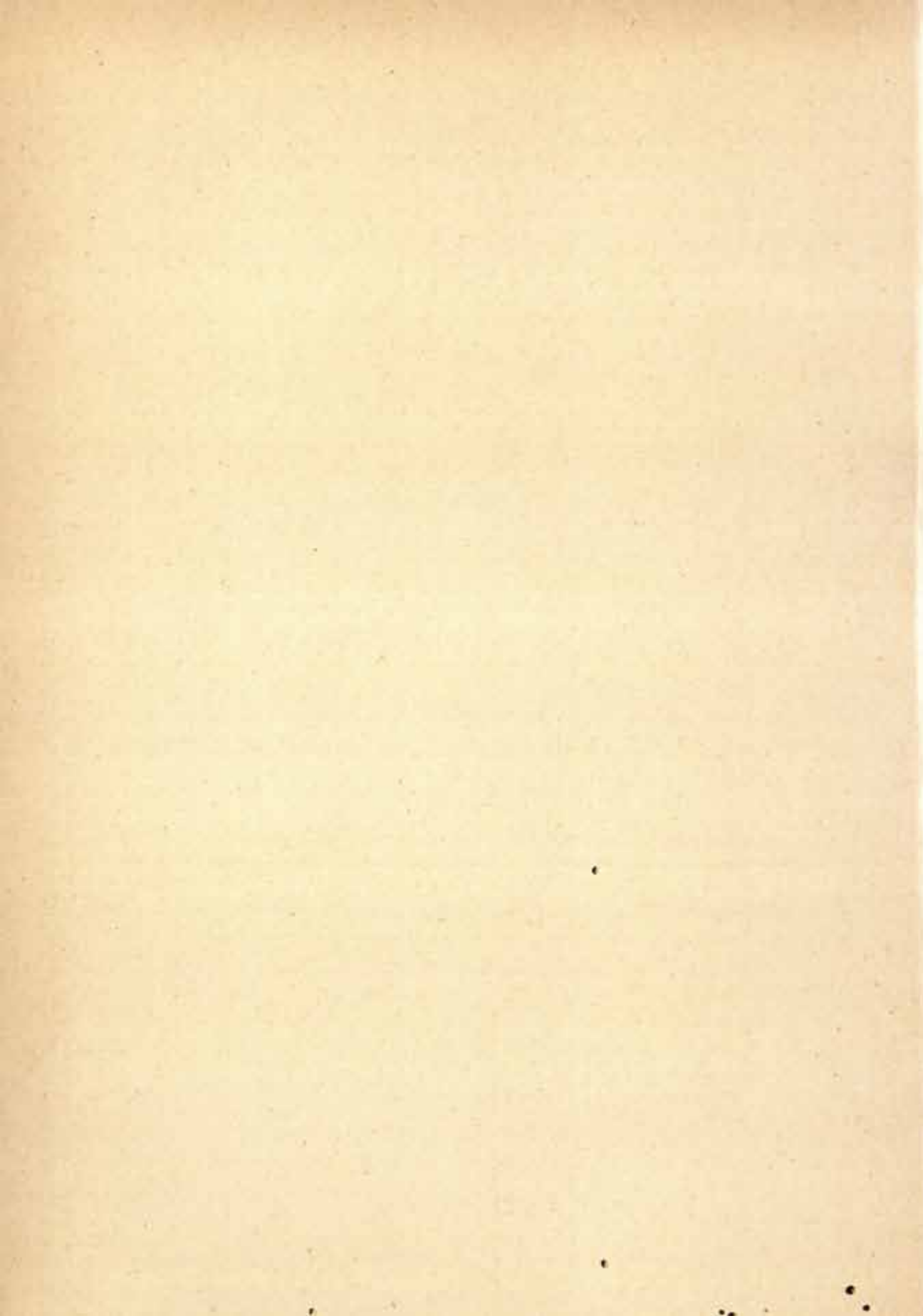
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L A W S
AND
LIST OF FELLOWS
OF THE
SOCIETY OF ANTIQUARIES OF SCOTLAND



L A W S

OF THE

SOCIETY OF ANTIQUARIES OF SCOTLAND.

INSTITUTED NOVEMBER 1780 AND INCORPORATED BY
ROYAL CHARTER 6TH MAY 1783.

(Revised and adopted November 30, 1901.)

1. The purpose of the Society shall be the promotion of ARCHÆOLOGY, especially as connected with the investigation of the ANTIQUITIES AND HISTORY OF SCOTLAND.

2. The Society shall consist of Fellows, Honorary Fellows, Corresponding Members, and Lady Associates.

3. Candidates for admission as Fellows must sign the Form of Application prescribed by the Council, and must be proposed by a Fellow and seconded by two members of the Council. Admission shall be by ballot.

4. The Secretaries shall cause the names of the Candidates and of their Proposers to be inserted in the billet calling the Meeting at which they are to be balloted for. The Ballot may be taken for all the Candidates named in the billet at once; but if three or more black balls appear, the Chairman of the Meeting shall cause the Candidates to be balloted for singly. Any Candidate receiving less than two-thirds of the votes given shall not be admitted.

5. Honorary Fellows shall consist of persons eminent in Archæology, who must be recommended by the Council, and balloted for in the same way as Fellows; and they shall not be liable for any fees of admission or annual subscriptions. The number of Honorary Fellows shall not exceed twenty-five.

6. Corresponding Members must be recommended by the Council and balloted for in the same way as Fellows, and they shall not be liable for any fees of admission or annual subscriptions.

7. Ladies who have done valuable work in the field of Archæology may be admitted as Lady Associates. The number of Lady Associates shall not exceed twenty-five. They shall be proposed by the Council and balloted for in the same way as Fellows, and shall not be liable for any fees of admission or annual subscriptions.

8. Before the name of any person is added to the List of Fellows, such person shall pay to the funds of the Society Two Guineas as an entrance fee and One Guinea for the current year's subscription, or may compound for the entrance fee and all annual subscriptions by the payment of Twenty Guineas at the time of admission. Fellows may compound for future annual subscriptions by a single payment of Fifteen Guineas after having paid five annual subscriptions; or of Ten Guineas after having paid ten annual subscriptions.

9. The subscription of One Guinea shall become due on the 30th November in each year for the year then commencing; and if any Fellow who has not compounded shall fail to pay the subscription for three successive years, due application having been made for payment, the Treasurer shall report the same to the Council, by whose authority the name of the defaulter may be erased from the list of Fellows.

10. Every Fellow not being in arrears of the annual subscription shall be entitled to receive the printed Proceedings of the Society from the date of election.

11. None but Fellows shall vote or hold any office in the Society.

12. Subject to the Laws and to the control of the Society in General Meetings, the affairs of the Society shall be managed by a Council elected and appointed as hereinafter set forth. Five Members of the Council shall be a quorum.

13. The Office-Bearers of the Society shall consist of a President, three Vice-Presidents, two Secretaries for general purposes, two Secretaries for Foreign Correspondence, a Treasurer, two Curators of the Museum, a Curator of Coins, and a Librarian. The President shall be elected for a period of five years, and the Vice-Presidents for a period of three years.

One of the Vice-Presidents shall retire annually by rotation and shall not again be eligible for the same office until after the lapse of one year. All the other Office-Bearers shall be elected for one year and shall be eligible for re-election.

14. In accordance with the agreement subsisting between the Society and the Government, the Board of Manufactures (now the Board of Trustees) shall be represented on the Council by two of its Members (being Fellows of the Society) elected annually by the Society. The Treasury shall be represented on the Council by the King's and Lord Treasurer's Remembrancer (being a Fellow of the Society).

15. The Council shall consist of the Office-Bearers, the three representative Members above specified, and nine Fellows, elected by the Society.

16. Three of the nine elected Members of Council shall retire annually by rotation, and shall not again be eligible till after the lapse of one year. Vacancies among the elected Members of Council and Office-Bearers occurring by completion of term of office, by retirement on rotation, by resignation, by death or otherwise, shall be filled by election at the Annual General Meeting. The election shall be by Ballot, upon a list issued by the Council for that purpose to the Fellows at least fourteen days before the Meeting.

17. The Council may appoint committees or individuals to take charge of particular departments of the Society's business.

18. The Annual General Meeting of the Society shall take place on St Andrew's Day, the 30th of November, or on the following day if the 30th be a Sunday.

19. The Council shall have power to call Extraordinary General Meetings when they see cause.

20. The Ordinary Meetings of the Society shall be held on the second Monday of each month, from December to May inclusive.

21. Every proposal for altering the Laws must be made through the Council; and the Secretaries, on instructions from the Council, shall cause intimation thereof to be made to all the Fellows at least one month before the General Meeting at which it is to be determined on.

FORMS OF BEQUEST.

Form of Special Bequest.

I, A. B., do hereby leave and bequeath to the Society of Antiquaries of Scotland incorporated by Royal Charter, my collection of and I direct that the same shall be delivered to the said Society on the receipt of the Secretary or Treasurer thereof.

General Form of Bequest.

I, A. B., do hereby leave and bequeath to the Society of Antiquaries of Scotland incorporated by Royal Charter, the sum of £ sterling [*to be used for the general purposes of the Society*] [or, *to be used for the special purpose or object, of*], and I direct that the said sum may be paid to the said Society on the receipt of the Treasurer for the time being.

LIST OF THE FELLOWS

OF THE

SOCIETY OF ANTIQUARIES OF SCOTLAND,

NOVEMBER 30, 1924.

PATRON:
HIS MAJESTY THE KING.

- | | |
|--|--|
| <p>1896.*ADAM, FRANK, c/o The Straits Trading Co. Ltd., Singapore, Straits Settlements.</p> <p>1922. ADAM, Sir JAMES, K.C., C.B.E., King's and Lord Treasurer's Remembrancer, Westquarter, Falkirk.</p> <p>1899. AGNEW, Sir ANDREW N., Bart., Lochnaw Castle, Stranraer,—<i>Vice-President</i>.</p> <p>1917. AGNEW, STAIR CARNEGIE, M.A., LL.B., Barrister-at-Law, 8 Prince Arthur Road, Hampstead, London, N.W. 3.</p> <p>1892. AILSA, The Most Hon. The Marquess of, Culzean Castle, Maybole.</p> <p>1905. ALEXANDER, R. S., Grant Lodge, 18 Lomond Road, Trinity.</p> <p>1909. ALISON, JAMES PEARSON, F.R.I.B.A., 45 Bridge Street, Hawick.</p> <p>1922. ALLAN, JAMES H., 143 Sauchiehall Street, Glasgow.</p> <p>1921.*ALLAN, JAMES WATSON, M.B., C.M., F.R.F.P.S. (Glas.), The Lodge, Broughton, Peeblesshire.</p> <p>1918. ALLAN, WILLIAM KINLOCH, Erngath, 2 Wester Coates Avenue.</p> <p>1922. ANDERSON, ARTHUR R., 8 Westbourne Terrace, Glasgow, W.</p> <p>1922. ANDERSON, ERIC S., 5 Eildon Street.</p> <p>1907. ANDERSON, JAMES LAWSON, 45 Northumberland Street.</p> <p>1897. ANDERSON, Major JOHN HAMILTON, 2nd East Lancashire Regiment, c/o Messrs Cox & Co., 16 Charing Cross, London, S.W. 1.</p> <p>1902.*ANDERSON, Major ROBERT DOUGLAS, c/o The Manager, Lloyd's Bank, Paignton, Devon.</p> | <p>1920. ANDERSON, Rev. ROBERT S. G., B.D., Minister of the United Free Church, Isle of Whithorn, Wigtownshire.</p> <p>1887.*ANDERSON-BERRY, DAVID, M.D., LL.D., F.R.S.E., Versailles, 19 Stanhope Road, Highgate, London, N. 6.</p> <p>1923. ANDREWS, MICHAEL CORBET, F.R.G.S., F.R.S.G.S., F.R.S.A.I., Orsett, Derryvolgie Avenue, Belfast.</p> <p>1913. ANGUS, Miss MARY, Immeriach, 354 Blackness Road, Dundee.</p> <p>1921. ANGUS, WILLIAM, Curator of the Historical Department, Record Office, H.M. General Register House.</p> <p>1910. ANNAN, J. CRAIG, Glenbank, Lenzie.</p> <p>1900. ANSTRUTHER, Sir RALPH W., Bart., Balcaskie, Pittenweem.</p> <p>1897. ANSTRUTHER-GRAY, WILLIAM, Lieut.-Col., Royal Horse Guards, Kilmany, Fife,—<i>Vice-President</i>.</p> <p>1918.*ARGYLL, His Grace The Duke of, Inveraray Castle.</p> <p>1914. ARMITAGE, Captain HARRY, late 15th Hussars, The Grange, North Berwick.</p> <p>1910. ARMSTRONG, A. LESLIE, M.C., F.S.I., 14 Swaledale Road, Millhouses, Sheffield.</p> <p>1921. ARNOTT, JAMES ALEXANDER, F.R.I.B.A., 13 Young Street.</p> <p>1901.*ARTHUR, ALEXANDER THOMSON, M.B., C.M., Ingleside, West Cultra, by Aberdeen.</p> <p>1910. ASHER, JOHN, 13 Pitcullen Crescent, Perth.</p> <p>1921. ASHWORTH, Rev. ADRIAN CLAUDE, 26 Balligeary Lane, Inverness.</p> |
|--|--|

An asterisk (*) denotes Life Members who have compounded for their Annual Contributions.

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- 1898.*CALLANDER, JOHN GRAHAM, Ruthvenfield House, Almondbank, Perthshire.—*Director of Museum*.
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1922. CAMERON, Lieut.-Colonel DONALD C., C.B.E., M.A., R.A.S.C., c/o Messrs Cox & Co., 16 Charing Cross, London, S.W. 1.
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1923. CAMPBELL, ALEXANDER, Commercial Bank of Scotland, Ltd., Abington.
1899. CAMPBELL, ARCHIBALD, J.P., Argyll Lodge, 62 Albert Drive, Pollokshields, Glasgow.
1906. CAMPBELL, DONALD GRAHAM, M.B., C.M., Auchinellan, Elgin.
1886. CAMPBELL, Sir DUNCAN ALEXANDER DUNDAS, Bart., C.V.O., of Barcaldine and Glenure, 16 Ridgeway Place, Wimbledon, S.W. 19.
1922. CAMPBELL, DUNCAN JOHN FORBES, 10 Cardozo Road, Holloway, London, N. 7.
1923. CAMPBELL, EDWARD MAITLAND, B.A. (Cantab.), 25 Moray Place.
1917. CAMPBELL, J. H. MAYNE, Broxmore Park, Romsey, Hants.
1922. CAMPBELL, JOHN MACLEOD, The Captain of Saddell Castle, Glen Saddell, by Carradale, Argyll.
1922. CAMPBELL, Sheriff JOHN MACMASTER, Norwood, Campbeltown, Argyll.
1909. CAMPBELL, Mrs M. J. C. BURNLEY, Ormidale, Colintnaive.
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1891. CARMICHAEL, JAMES, of Arthursstone, Ardler, Meigle.
- 1888.*CARMICHAEL, The Right Hon. LORD, of Skirling, G.C.S.I., G.C.I.E., K.C.M.G., 13 Portman Street, London, W. 1.
1919. CARRNIE, The Lady HELENA M., Rohallion, Murthly, Perthshire.
1923. CARRNIE-ARMSTRONG, Lieut.-Col., Balmahoon, Brechin.
1922. CARRUTHERS, ARTHUR STANLEY, A.C.A., Naworth House, 28 Foxley Hill Road, Purley, Surrey.
1896. CAW, JAMES L., Director of the National Galleries of Scotland, 14 Cluny Place.
1919. CHALMERS, Rev. HENRY REID, The Manse, Duffus, Elgin.
1903. CHISHOLM, EDWARD A., 42 Great King Street.
1901. CHRISTIE, Miss, Cowden Castle, Dollar.
1910. CHRISTISON, JAMES, J.P., Librarian, Public Library, Montrose.
1902. CLARK, ARCHIBALD BROWN, M.A., Professor of Political Economy, University of Manitoba, Winnipeg, Canada.
1889. CLARK, DAVID R., M.A., 8 Park Drive West, Glasgow.
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1923. CLARKE, JOHN SMITH, 5 George Drive East, Linthouse, Glasgow.

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1916. CLOUSTON, ERIC CROSBY TOWNSEND, M.R.C.S.(Eng.), L.R.C.P.(Lond.), The Willows, Lavenham, Suffolk; Three Counties Mental Hospital, Arlesey, Beds.
1917. CLOUSTON, J. STORER, Smoogro House, Orphir, Orkney.
1922. CLOUSTON, RONALD GILLAN, L.R.C.P. (Edin.), L.R.C.S. (Edin.), 32 Barrington Drive, Glasgow, C. 4.
- 1921.*CLOUSTON, THOMAS HAROLD, O.B.E., Langskaill, 33 St Mary's Road, Wimbledon, Surrey.
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1916. COATES, HENRY, Corander, Perth.
- 1901.*COCHRAN-PATRICK, Mrs. Woodside, Beith.
- 1898.*COCHRAN-PATRICK, NEIL J. KENNEDY, of Woodside, Advocate, Ladyland, Beith.
1923. COCHRANE, RICHMOND INGLIS, 26 Abercromby Place.
- 1919.*COCKBURN, Captain ARCHIBALD FREDERICK, R.E. (T.F.), The Abbey, North Berwick.
- 1920.*COLLINGWOOD, R. G., M.A., F.S.A., Pembroke College, Oxford.
1924. COLLINS, GEORGE N. M., Aultnachie House, Sycamore Terrace, Corstorphine.
1908. COLLINS, Major HUGH BROWN, Craigmarloch, Kilmacolm.
1924. COLT, RONALD S. H., of Gartsherrie and Northfield, B.A. (Oxon.), Northfield House, St Abbs, Berwickshire.
- 1921.*COLVILLE, Captain NORMAN R., M.C., Penheale Manor, Egloskerry, Cornwall.
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1921. CORKILL, WILLIAM HENRY, Bridge Stores, Bowring Road, Ramsey, Isle of Man.
1920. CORNELIUS, Rev. WILLIAM J. J., D.Litt., M.A., B.D., A.K.C., F.R.Hist.S., C.F., etc., All Saints' Vicarage, Sumner Road, North Peckham, London, S.E.15.
1911. CORRIE, JOHN, Burnbank, Moniaive, Dumfriesshire.
1913. CORRIE, JOHN M., Post Office, Dairy, Ayrshire.
- 1920.*CORSAR, KENNETH CHARLES, of Rosely, Rosely, Arbroath.
1918. COUPER, Rev. W. J., M.A., 26 Circus Drive, Dennistoun, Glasgow.
1891. COUTTS, Rev. ALFRED, Ph.D., B.D., Temple U.F. Manse, Midlothian.
1920. COWAN, FRANCIS, C.A., Wester Lea, Murrayfield.
1887. COWAN, JOHN, W.S., St Roque, Grange Loan.
- 1920.*COWAN, ROBERT CRAIG, Eskhill, Inveresk, Midlothian.
1888. COWAN, WILLIAM, 47 Braid Avenue.
- 1893.*COX, ALFRED W., Glendoick, Glencarse, Perthshire.
- 1901.*COX, DOUGLAS H. (no address).
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- 1911.*CRAW, JAMES HEWAT, West Foulden, Berwick-on-Tweed.
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- 1901.*CRAWFORD, The Right Hon. The Earl of, K.T., Balcarnes, Colinsburgh, Fife.
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1905. CREE, JAMES EDWARD, Tusculum, North Berwick.
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- 1889.*CURLE, JAMES, F.S.A., Priorwood, Melrose,—*Curator of Museum*.
- 1886.*CURRIE, JAMES, Larkfield, Wardie Road.
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- 1879.*CURSITER, JAMES WALLS, 3 Denham Green Avenue.

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1883. DALRYMPLE, The Hon. HEW HAMILTON, Lochinch, Wigtownshire.
1913. DALYELL, Major Sir JAMES, Bart., The Binna, Linlithgow.
1924. DAVEY, HARRY LEONARD, Fern Villa, Stoke Park, Coventry.
1920. DAVIDSON, ALFRED ROBERT, Invermahaven, Abernethy, Perthshire.
1924. DAVIDSON, HUGH, Braedale, Lanark.
- 1886.*DAVIDSON, JAMES, Solicitor, Kirriemuir.
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- 1923.*DICKSON, ARTHUR HOPE DRUMMOND, 5 Lennox Street.
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1895. DICKSON, WILLIAM K., LL.D., Advocate, 8 Gloucester Place, —*Librarian*.
- 1882.*DICKSON, WILLIAM TRAQUAIR, W.S., 11 Hill Street.
1919. DINWOODIE, JOHN, Union Bank House, Crieff.
- 1886.*DIXON, JOHN HENRY, Clach na Faire, Pitlochry.
1910. DIXON, RONALD AUDLEY MARTINEAU, F.R.S.E., F.G.S., F.R.G.S., Thearne Hall, near Beverley, Yorkshire.
1923. DOBBIE, Sir JOSEPH, 10 Learmonth Terrace.
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1895. DONALDSON, HENRY T., British Linen Bank, Nairn.
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- 1900.*DRUMMOND, JAMES W., Westerlands, Stirling.
- 1896.*DRUMMOND, ROBERT, O.B.E., Forneth, Castlehead, Paisley.
- 1895.*DRUMMOND-MORAY, Capt. W. H., of Abercairney, Crieff.
1902. DUFF-DUNBAR, Mrs L., of Ackergill, Ackergill Tower, Wick, Caithness.
1920. DUNCAN, ALEXANDER MACLAUCHLAN, A.R.I.B.A., c/o Engineer-in-Chief, Chinese Maritime Customs, Shanghai, China.
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1923. DUNLOP, Miss, of Shieldhill, Biggar.
1923. DUNLOP, Rev. WILLIAM, M.A., St David's Manse, Buckhaven, Fife.
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- 1892.*EDWARDS, JOHN, LL.D., F.R.S.E., 4 Great Western Terrace, Glasgow.
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- 1923.*ELPHINSTONE, The Right Hon. LORD, Carberry Tower, Musselburgh.
1920. EVANS, CHARLES, Collingwood, 69 Edward Road, Balsall Heath, Birmingham.
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1923. FAIRLIE, REGINALD F., A.R.S.A., Architect, 7 Ainslie Place.
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1922. FAVELL, RICHARD VERNON, M.R.C.S., L.R.C.P., Penberth, St Buryan, S.O., Cornwall.
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1921. FERGUSON, Rev. JAMES, The Manse, Corstorphine.
- 1899.*FINDLAY, JAMES LESLIE, Architect, 10 Eton Terrace.
- 1892.*FINDLAY, Sir JOHN R., K.B.E., LL.D., 3 Rothesay Terrace.
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1884. FLEMING, D. HAY, LL.D., 4 Chamberlain Road.
1909. FLEMING, Rev. D. W. B., Culross Park, Culross.
- 1922.*FLEMING, JOHN ARNOLD, Locksley, Helensburgh.
1917. FORGAN, ANDREW, 292 Hingston Avenue, Notre Dame de Grâce, Montreal, Canada.
1917. FORSYTH, HUGH ALEXANDER, J.P., Kerryston Bank, Muirros, near Dundee.
- 1911.*FORSYTH, WILLIAM, F.R.C.S. Ed., c/o Messrs Livingstone & Dickson, 54 Queen Street.
1923. FORTEVOT, The Right Hon. LORD, of Dupplin, Dupplin Castle, Perth.
- 1906.*FOULKES-ROBERTS, ARTHUR, Solicitor, Bron-y-parc, Denbigh, N. Wales.
1923. FRANKLIN, CHARLES A. H., M.B., B.S. (Lond.), M.A., B.Sc. (Ill.), M.R.C.S. (Eng.), L.R.C.P. (Lond.), "Kwato," 23 Liskeard Gardens, Blackheath, London, S.E. 3.
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1918. FRASER, HUGH ALEXANDER, M.A., Glen Urquhart Higher Grade School, Drumnadrochit, Inverness-shire.
1922. FRASER, Captain The Rev. JOSEPH R., F.R.S.E., United Free Church Manse, Kinneff, Bervie.
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1912. GALLOWAY, Mrs LINDSAY, Kilchrist, Campbeltown.
- 1920.*GALLOWAY, THOMAS L., Advocate, Auchendrane, by Ayr.
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1908. GARDNER, ALEXANDER, Publisher, Dunrod, Paisley.
1921. GARDNER, Lieut.-Colonel ALEXANDER, Artariman, Row, Dumbartonshire.
1917. GARDNER, GEORGE ALEXANDER, C.A., Calle Callao, 194, Buenos Aires, Argentine Republic.
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1923. GARDNER, JOHN, Woodend, Houston.
1921. GARDNER, WILLOUGHBY, F.S.A., Y Berlfa, Deganwy, North Wales.
1923. GARRETT, MATTHEW LAURIE, 1 Wester Coates Gardens.
- 1916.*GARSON, JAMES, W.S., 4 Chester Street.
1919. GASS, JOHN, M.A., Orlig, Carlisle, Lanarkshire.
1911. GAWTHORP, WALTER E., 4 Trafalgar Square, London, W.C. 2.
1923. GIBB, JOHN TAYLOR, High Street, Mauchline, Ayrshire.
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1912. GIBSON, JOHN, Bank Agent, 110 Queen Street, Glasgow.
1920. GIBSON, JOHN, F.S.A., F.C.S., 15 Tynedale Terrace, Hexham, Northumberland.
- 1903.*GIBSON, WILLIAM, M.A., 44 Piazza Farnese, Rome.
1924. GILES, ALEXANDER FALCONER, M.A. (Edin. and Oxon.), Lecturer in Ancient History, University of Edinburgh, 5 Palmerston Road.
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- 1912.*GLADSTONE, HUGH S., M.A., F.R.S.E., Capenoch, Thornhill, Dumfriesshire.
1901. GLADSTONE, SIR JOHN R., Bart., Fasque, Laurencekirk.
1904. GLENARTHUR, The Right Hon. LORD, of Carlung, LL.D., Carlung, Fullarton, Troon.
1921. GORDON, REV. JAMES BRYCE, The Manse, Oldhamstocks, Cockburnspath.
1909. GORDON, JAMES TENNANT, O.B.E., Chief Constable of Fife and Kinross, Sandilands, Cupar, Fife.
1883. GORDON-GILMOUR, Brigadier-General ROBERT GORDON, C.B., C.V.O., D.S.O., of Craigmillar, The Inch, Liberton.
1911. GORLAY, CHARLES, B.Sc., F.R.I.B.A., I.A., Professor of Architecture in the Royal Technical College, Glasgow, Coniston, Craigdhu Road, Milngavie.
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1888. GRANT, F. J., W.S., Lyon Office, H.M. General Register House.
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- 1907.*GUTHRIE, CHARLES, W.S., 1 N. Charlotte Street.
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- 1922.*HAMILTON, JOHN, Punta Loyola, Patagonia, South America.
- 1901.*HAMILTON OF DALZELL, The Right Hon. LORD, K.T., C.V.O., Dalzell, Motherwell.
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- 1903.*HARRIS, WALTER B., Tangier, Morocco.
1913. HARROLD, Miss ELISABETH SEARS, Westover, Virginia, U.S.A.
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1922. HAY, ALEXANDER MACKENZIE, Editor of *The Statist*, 51 Cannon Street, London, E.C.
- 1865.*HAY, ROBERT J. A., c/o Messrs Dundas & Wilson, 16 St Andrew Square.
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1902. HENDERSON, ADAM, University Library, Glasgow.
1919. HENDERSON, GEORGE, 31 Battery Place, Rotheray.
- 1889.*HENDERSON, JAMES STEWART, 1 Pond Street, Hampstead, London, N.W. 3.
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- 1909.*HOLMS, JOHN A., Formakin, Bishopton, Renfrew-shire.
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1923. INCHES, EDWARD J., D.L., 88 Princes Street.
1908. INGLIS, ALAN, Art Master, Arbroath High School, 4 Osborne Terrace, Millgate Loan, Arbroath.
1891. INGLIS, ALEXANDER WOOD, 4 Rosebery Crescent.
1904. INGLIS, FRANCIS CAIRD, Rock House, Calton Hill.
- 1911.*INGLIS, HARRY R. G., 10 Dick Place.
- 1906.*INGLIS, JOHN A., Advocate, 13 Randolph Crescent.
1920. INNES, THOMAS, of Learney, 2 Inverleith Row.
1923. IRVINE, QUENTIN H. I., Barra Castle, Oldmeldrum, Aberdeenshire.
1921. IRVING, JOHN, Malmo, Cardross, Dumbarton-shire.
1913. JACKSON, GEORGE ERSKINE, O.B.E., M.C., W.S., Kirkbuddo, Forfar.
1923. JACKSON, STEWART DOUGLAS, 73 West George Street, Glasgow.
1918. JAMIESON, JAMES H., 12 Sciennes Gardens.
1923. JAMIESON, JOHN BOYD, M.D., F.R.C.S.E., 43 George Square.
1922. JERU, THOMAS JOHN, M.A., M.D., Professor of Geology, University of Edinburgh, 35 Great King Street.
1916. JOHNSON, JOHN BOLAM, C.A., 12 Granby Road,—*Treasurer*.
- 1902.*JOHNSTON, ALFRED WINTLE, Architect, 29 Ashburnham Mansions, Chelsea, London, S.W. 10.
1907. JOHNSTON, WILLIAM CAMPBELL, W.S., 19 Walker Street.
1892. JOHNSTONE, HENRY, M.A. (Oxon.), 69 Northumberland Street.
1920. JOHNSTONE, JAMES F. K., 67 Forest Avenue, Aberdeen.
1898. JONAS, ALFRED CHARLES, Locksley, Tennyson Road, Bognor, Sussex.
1922. JOFF, PETER, Cabragh, by Huntly.
1923. JORDAN, Rev. ALBERT, D.D., LL.D., M.A., The Rectory, Llanbadarn-fawr, Penybont, Radnor-shire.
1922. JOUBERT, FÉLIX, Architect, Dyke Lodge, Dyke Road Avenue, Patcham, near Brighton, Sussex.
1924. JOWITT, R. LIONEL PALGRAVE, Chilland, near Winchester.
1917. KATER, ROBERT McCULLOCH, Coniston, Glasgow Road, Kilmarnock.

1910. KAY, ARTHUR, J.P., F.S.A., 11 Regent Terrace.
1893. KAYE, WALTER JENKINSON, M.A., F.S.A., Pembroke, Park View, Harrogate.
- 1922.*KEILLER, ALEXANDER, of Morven, Ballater, Aberdeenshire.
1912. KELLY, JOHN KELSO, 105 Morningside Drive.
- 1870.*KELTIE, Sir JOHN S., LL.D., F.R.G.S., F.S.S., 88 Brondesbury Road, London, N.W. 6.
1915. KELWAY, CLIFTON, F.R.Hist.S., 57 Warwick Square, London, S.W. 1.
1911. KENNEDY, ALEXANDER, Kenmill House, Hamilton Drive, Bothwell.
1911. KENNEDY, ALEXANDER BURGESS, 6 Mansfield Place.
1924. KENNEDY, JOHN, 55 Marchmont Road.
1924. KENNEDY, WILLIAM, of Low Glengyre, Kirkcolum, Stranraer.
1907. KENT, BENJAMIN WILLIAM JOHN, Tatefield Hall, Beckwithshaw, Harrogate.
1910. KER, CHARLES, M.A., C.A., Easterton, Milngavie, Stirlingshire.
1912. KER, JAMES INGLIS, 6 Belgrave Place.
- 1889.*KERMODE, PHILIP M. C., Advocate, The Manx Museum, Douglas, Isle of Man.
1889. KERR, ANDREW WILLIAM, F.R.S.E., 81 Great King Street.
1896. KERR, HENRY F., A.R.I.B.A., 12 East Claremont Street.
1920. KERR, WALTER HUME, M.A., B.Sc., F.R.S.E., Lecturer on Structural Engineering, The University, Edinburgh.
- 1911.*KITCHEN, W. T., W.S., Keeper of the General Register of Sasines, H.M. General Register House.
1911. KEYSER, CHARLES E., M.A., F.S.A., J.P., D.L., Aldermaston Court, Reading.
- 1912.*KING, CHARLES, F.S.Sc. Lond., 21 Newton Place, Glasgow.
- 1912.*KING, Sir JOHN WESTALL, Bart., 41 West George Street, Glasgow.
1921. KINGHORN, ROBERT, Whitson West Newton, Chirnside, Berwickshire.
- 1900.*KINTORE, The Right Hon. The Earl of, K.T., G.C.M.G., LL.D., Keith Hall, Inverurie.
1919. KIRKNESS, WILLIAM, Fernlea, Kirkwall, Orkney.
1896. KIRKPATRICK, JOHN G., W.S., 2 Belford Park.
1915. KIRKWOOD, CHARLES, Duncairn, Helensburgh.
1922. KLEIN, WALTER G., F.S.A., 7 Eldon Road, London, N.W. 3.
1922. KNEEN, Miss FLORENCE BEATRICE, Ballacrye, Ballaugh, Isle of Man.
1906. KNOWLES, Captain WILLIAM HENRY, F.S.A., Well Close, Lansdown Parade, Cheltenham.
- 1924.*KNOX, WILLIAM BARR, Redheugh, Kilbirnie, Ayrshire.
1922. LACAILLE, ARMAND D., 2 Minard Terrace, Partickhill, Glasgow.
- 1910.*LAIDLIE, PERCY WARD, LL.D., R.C.S. Edin., Garies, C.P., South Africa.
1920. LAMB, ERNEST H., M.A. (Hons.) Edin., Rector of Lanark Grammar School, The Rectory, Lanark.
1923. LAMB, Rev. GEORGE, B.D., Beechwood, Melrose.
1923. LAMOND, ROBERT, M.A., LL.B., 8 Marchmont Terrace, Kelvinside, Glasgow.
- 1901.*LAMONT, Sir NORMAN, Bart., M.P., of Knockdow, Toward, Argyllshire.
1893. LANGWILL, ROBERT B., 7 St Leonard's Bank, Perth.
1919. LAWSON, Lieut.-Col. H. SLEEMAN, R.A.S.C., c/o Messrs Cox & Co., 16 Charing Cross, London, S.W. 1.
- 1882.*LEADRETT, THOMAS GREENSHIELDS, of Spital Tower, Denholm, Roxburghshire.
1919. LEASK, JOHN, North of Scotland Bank Buildings, Forres.
- 1910.*LEIGH, Captain JAMES HAMILTON, Bindon, Wellington, Somerset.
1907. LEIGHTON, JOSEPH MACKENZIE, Librarian, Public Library, Greenock.
1907. LENNOX, DAVID, M.D., F.R.A.S., Raddon Grange, Elie, Fife.
- 1902.*LEVESON-GOWER, F. S., Travellers' Club, Pall Mall, London.
1907. LIND, GEORGE JAMES, 121 Rua do Golgotha, Oporto, Portugal.
- 1919.*LINDSAY, Mrs BROWN, of Colstoun and Muirkirk, Colstoun, Haddington.
1909. LINDSAY, Rev. JOHN, M.A., D.D., LL.D. (no address).
1890. LINDSAY, LEONARD C. G., Broomhills, Honiton, Devon.
1920. LINLITHGOW, The Most Hon. The Marquess of, Hopetoun House, South Queensferry.
1921. LINTON, ANDREW, B.Sc., Gilmanscleuch, Selkirk.
- 1881.*LITTLE, ROBERT, R.W.S., Hilton Hall, St. Ives, Huntingdonshire.
1924. LOCH, Major PERCY GORDON, Indian Army, c/o Messrs Lloyds Bank, Ltd., Indian Branch, 16 Charing Cross, London, S.W. 1.
1915. LOCKHART, JOHN Y., 12 Victoria Gardens, Kirkcaldy.

- 1901.*LONEY, JOHN W. M., 6 Carlton Street.
 1917. LOVE, WILLIAM HENDERSON, M.A., A.Mus., Rowanbank, Craigendoran, Helensburgh.
 1923. LOWERISON, BELLERBY, Ruskin School, Heacham, Norfolk.
 1905. LUSK, Rev. DAVID COLVILLE, 2 South Parks Road, Oxford.
 1921. LYLE, ROBERT, Strathculm, Helensburgh.
 1910. LYONS, ANDREW W., 12 Melville Place.
1892. MACADAM, JOSEPH H., Aldborough Hall, Aldborough Hatch, near Ilford, Essex.
 1908. M'CONACHIE, Rev. WILLIAM, D.D., The Manse, Lauder.
 1915. M'CORMICK, ANDREW, 66 Victoria Street, Newton-Stewart.
 1913. M'CORMICK, Sir WILLIAM S., LL.D., 43 Frögnal, London, N.W. 3.
 1924.*M'COSH, JAMES, Solicitor, Swinkles, Dalry, Ayrshire.
 1919. MACDONALD, ALLAN REGINALD, of Waternish and Ardmore, Fasach House, Waternish, Skye.
 1904. MACDONALD, CHARLES, Dunglass Castle, Bowling.
 1885. MACDONALD, COLL REGINALD, M.D., 17 Wellington Square, Ayr.
 1900.*MACDONALD, GEORGE, C.B., F.B.A., M.A., LL.D., D.Litt., 17 Learmonth Gardens,—*Curator of Coins*.
 1923. MACDONALD, Miss JANE C. C., Ballintuin House, Blairgowrie.
 1924. M'DONALD, JOHN, Museum Conservator, Hillhead, Balgownie, Bridge of Don, Aberdeen.
 1890.*MACDONALD, JOHN MATHESON, Moor Hill, Farnham, Surrey.
 1922. MACDONALD, ROBERT, J.P., 24 Burnbank Terrace, Glasgow.
 1872.*M'DOWALL, THOMAS W., M.D., Burwood, Wadhurst, Sussex.
 1908. M'ELNEY, Rev. ROBERT, M.A., The Manse, Downpatrick, County Down.
 1911. M'EWEN, HUGH DRUMMOND, 13 Lovelace Road, West Dulwich, London, S.E. 21.
 1917. M'EWEN, ROBERT FINNIE, B.A. Cantab., Advocate, of Marchmont and Bardrochat, Marchmont, Berwickshire.
 1903. M'EWEN, W. C., M.A., W.S., 9 Douglas Crescent.
 1917. MACFAHLANE-GRIEVE, R. W., Penchrise Peel, Hawick.
 1898.*MACGILLIVRAY, ANGUS, C.M., M.D., D.Sc., 23 South Tay Street, Dundee.
 1923. M'GOVERN, Rev. JOHN BERNARD, St Stephen's Rectory, Chorlton-on-Medlock, Manchester, S.E.
- 1901.*MACGREGOR, ALASDAIR R., of Macgregor, Cardney, Dunkeld.
 1918. MACGREGOR, Rev. WILLIAM CUNNINGHAM, Manse of Covington, Thankerton.
 1924. M'GROUTHER, THOMAS, Grange Lodge, Larbert, Stirlingshire.
 1913. MACKINTOSH, H. B., M.B.E., Redhythe, Elgin.
 1922. MACKINTOSH, Rev. R. SMITH, Hon. C.F., The Manse, Girvan, Ayrshire.
 1893. MACKINTOSH, WILLIAM FYFE, Procurator-Fiscal of Forfarshire, Linroch, 3 Craigie Terrace, Dundee.
 1897.*MACINTYRE, P. M., Advocate, Auchengower, Brackland Road, Callander.
 1919. MACK, JAMES LOGAN, S.S.C., 8 Grange Terrace.
 1908. MACKAY, GEORGE, M.D., F.R.C.S.E., 26 Drumsheugh Gardens.
 1924. MACKAY, GEORGE DODS, 11 Boswall Quadrant.
 1903. MACKAY, GEORGE G., Melness, Hoylake, Cheshire.
 1888. MACKAY, J. F., W.S., White House, Cramond Bridge, Midlothian.
 1912. MACKAY, NORMAN DOUGLAS, M.D., B.Sc., D.P.H., Dall-Avon, Aberfeldy.
 1909. MACKEAN, Major NORMAN M., Parkgate, Paisley.
 1918. M'KECHNIE, Sir JAMES, K.B.E., The Abbey House, Furness Abbey.
 1924. MACKIECHNIE, JOHN, M.A. (Hons.), 3 Eldon Terrace, Partickhill, Glasgow.
 1909. MACKIECHNIE, JOHN MACLELLAN, of Balfuning-Douglas, 6 Westbourne Gardens, Glasgow, W.
 1923. MACKIECHNIE, ROBERT G. S., Artist, 6 Westbourne Gardens, Glasgow, W.
 1923. MACKENZIE, ALEXANDER G. R., F.R.I.B.A., Lower Woodend, Marlow, Bucks.
 1911. MACKENZIE, ALEXANDER J., Solicitor, 62 Academy Street, Inverness.
 1922. MACKENZIE, ALEXANDER MARSHALL, LL.D., R.S.A., F.R.I.B.A., 173a Union Street, Aberdeen.
 1887. MACKENZIE, DAVID J., Honorary Sheriff-Substitute for Inverness, Elgin, and Nairn, Deansford, Bishopmill, Elgin.
 1918. MACKENZIE, DONALD A., 19 Merchiston Crescent.
 1919. MACKENZIE, HECTOR HUGH, J.P., Balelone, Lochmaddy, North Uist.
 1891.*MACKENZIE, JAMES, J.P., 2 Billbank Crescent.
 1911. MACKENZIE, JOHN, Dunvegan House, Dunvegan, Skye.

1910. MACKENZIE, MURDO TOLME, M.B., Scolpaig, Lochinaddy.
1882. MACKENZIE, R. W. R., Earlaball, Leuchars, Fife.
1904. MACKENZIE, WILLIAM COOK, 94 Church Road, Richmond-on-Thames.
1904. MACKENZIE, W. M., M.A., Secretary, Royal Commission on Ancient and Historical Monuments of Scotland, 4 Drumsheugh Gardens.
1920. M'KERCHAR, JAMES, M.B.E., M.A., Headquarters, Highland Area, 8 Kinnoull Street, Perth.
1921. MACKIE, DAVID CABLE, 16 Queen's Gardens, St Andrews.
1915. MACKIRDY, Captain ELLIOT M. S., M.A. (Oxon.), Abbey House, Malmesbury, Wiltshire.
- 1919.*MACLAGAN, DOUGLAS PHILIP, W.S., 28 Heriot Row,—Secretary.
- 1923.*MACLAGAN, Miss MORAG, 28 Heriot Row.
1922. M'LAHLEN, THOMAS, Burgh Engineer, Redcliffe, Barnhill, Perth.
1917. M'LEAN, JAMES, School House, Drumchapel, Glasgow.
- 1885.*MACLEHOSE, JAMES, M.A., LL.D., F.S.A., The Old Parsonage, Lamington, Lanarkshire.
1923. MACLEOD, DUNCAN, of Skeabost, by Portree, Skye.
1910. MACLEOD, FREDERICK THOMAS, 55 Grange Road.
1921. MACLEOD, JAMES RHYS STUART, B.A., LL.B. (Cantab.), Colonial Office, Overseas Settlement Dept., 3, 4 Clement's Inn, Strand, London, W.C.
1922. MACLEOD, Rev. MALCOLM, M.A., United Free Church Manse, Lochgilphead, Argyll.
1923. M'LEOD, Rev. MURDO KENNEDY, M.A., 84 Grange Road, Langside, Glasgow.
1921. MACLEOD, NEIL MACKENZIE, 24 Barrington Drive, Glasgow.
- 1890.*MACLEOD, Sir REGINALD, K.C.B., Vinters, Maidstone, Kent.
1909. MACLEOD, Major ROBERT CRAWFORD, 19 Scotland Street.
1921. MACLEOD, WILLIAM COLIN, 30 Stafford Street.
- 1907.*MACLEOD, Rev. WILLIAM H., B.A. (Cantab.), Fingary, Shandon, Dumbartonshire.
1919. MACLEOD, Rev. CAMPBELL M., B.D., Minister of Victoria Park United Free Church, Partick, 13 Westbourne Gardens, Glasgow, W.
1905. MACMILLAN, The Right Hon. H. P., P.C., LL.D., 32 Moray Place.
1916. M'MILLAN, Rev. WILLIAM, Chaplain to the Forces, St Leonard's Manse, Dunfermline.
1915. MACNEIL, ROBERT LISTER, of Barra, 1335 Madison Avenue, New York.
1909. MACPHAIL, J. R. N., K.C., Sheriff of Stirling, Dumbarton, and Clackmannan, 17 Royal Circus.
1918. MACPHERSON, DONALD, 3 St John's Road, Pollokshields, Glasgow.
1921. M'PHERSON, JAMES, 10 Queen's Gardens, St Andrews.
- 1909.*MACRAE, Major COLIN, C.B.E., of Feirlinn, Colintrave, Argyll.
1914. MACRAE-GILSTRAP, Lieutenant-Colonel JOHN, of Eilean Donan, Ballimore, Otter Ferry, Argyll.
- 1882.*MACRITCHIE, DAVID, C.A., 4 Archibald Place.
1921. M'ROBBIE, WILLIAM ALEXANDER, F.S.I., 102 Desswood Place, Aberdeen.
- 1923.*MACROBERT, Lady, B.Sc., F.G.S., Douneside, Tarland, Aberdeenshire.
1909. MALCOLM, JOHN, 14 Durham Street, Monifieth, Forfarshire.
1896. MALLOCH, JAMES, M.A., West Croft, Cramond Bridge, Midlothian.
1914. MALLOCH, JAMES J., M.A., Norwood, Spylaw Bank Road, Colinton.
1919. MALLOCH, WILLIAM STRACHAN, 41 Charlotte Square.
1901. MANN, LUDOVIC M'LELLAN, 144 St Vincent Street, Glasgow.
1921. MARR, HAMILTON CLELLAND, M.D., H.M. Commissioner of Control, Lieut.-Col., R.A.M.C., 10 Succoth Avenue, Murrayfield.
1923. MARSHALL, CHARLES HAY, S.S.C., Dunholm, Dundee.
1906. MARSHALL, HENRY B., Rachan, Broughton, Peeblesshire.
1917. MARSHALL, JOHN NAIRN, M.D., 7 Battery Place, Rothesay.
1885. MARSHALL, WILLIAM HUNTER, Callander, Perthshire.
1922. MARTIN, GEORGE MACGREGOR, 5 West Park Gardens, Dundee.
1915. MARTIN, JAMES H., Hollybank, Panmure Terrace, Dundee.
1909. MARTIN, Rev. JOHN, 9 Corrennie Gardens.
1921. MARWICK, HUGH, M.A., 10 King Street, Kirkwall, Orkney.
1917. MARWICK, THOMAS PURVES, A.R.I.B.A., F.S.I., F.I.Arb., 43 Lauder Road.
1922. MASON, JOHN BRUCE, 6 High Street, Selkirk.
1908. MASTIN, JOHN, M.A., D.Sc., Ph.D., Litt.D., LL.D., etc., Glanllyfawr, Llwyndy Road, Pen-y-Groes, Carnarvonshire.
1884. MAXWELL, The Right Hon. Sir HERBERT EUSTACE, Bart., D.C.L., LL.D., F.R.S., of Monreith, Wigtownshire.

- 1892.*MAXWELL, Sir JOHN STIRLING, Bart., LL.D., H.R.S.A., Pollok House, Pollokshaws.
1904. MAY, THOMAS, M.A., F.E.I.S., F.S.A., Spring Hill, Ferntower Road, Crieff.
1920. MELDRUM, Rev. NEIL, B.D., Ph.D., Minister of Forteviot, Perthshire.
1923. MENZIES, ALAN I., W.S., Larchgrove, Balerno.
1900. MENZIES, W. D. GRAHAM, of Pitcur, Hallyburton House, Coupar-Angus.
1878. MERCER, Major WILLIAM LINDSAY, Huntingtower, Perth.
1882. MILLAR, ALEXANDER H., LL.D., Albert Institute, Dundee.
1896. MILLER, ALEXANDER C., M.D., Craig Linnhe, Fort-William.
- 1878.*MILLER, GEORGE ANDERSON, W.S., Knowehead, Perth.
- 1907.*MILLER, ROBERT SCHAW, W.S., 11 Douglas Crescent.
1911. MILLER, STEUART NAPIER, Lecturer in Roman History, The University, Glasgow.
1920. MILNE, Rev. A. A., Oakfield, Doune, Perthshire.
1923. MILNE, GEORGE, Craigellie House, Lonmay, Aberdeenshire.
1884. MITCHELL, HUGH, Solicitor, Pitlochry.
1922. MITCHELL, Lieut.-Colonel J. M., O.B.E., M.C., M.A., Secretary, Carnegie United Kingdom Trust, Viewfield, Dunfermline.
1923. MITCHELL, STEPHEN, of Gilkerscleugh, Abington, Lanarkshire.
- 1890.*MITCHELL, SYDNEY, Architect, The Pleasance, Gullane.
1920. MOFFAT, MUIRHEAD, Motven, 11 Dungeyne Street, Maryhill Park, Glasgow.
1922. MONEY, JAMES, Architect, 3 Princes Square, Strathbungo, Glasgow.
1908. MONTGOMERIE, JOHN CUNNINGHAM, Dalmore, Stair, Ayrshire.
1922. MOONEY, JOHN, J.P., Cromwell Cottage, Kirkwall, Orkney.
1921. MOORE, WILLIAM JAMES, L.R.C.S.E., L.R.C.P.E., F.R.F.P.S.G., 10 Parkgrove Terrace, Glasgow.
1895. MORAY, The Right Hon. The Earl of, H.R.S.A., Kinfauns Castle, Perth.
1922. MORRIS, Professor H. CARLTON S., M.A. (Oxon.), F.R.Hist.S., University of Trinity College, Toronto, Canada.
1882. MORRIS, JAMES ARCHIBALD, A.R.S.A., Architect, Wellington Chambers, Ayr.
1882. MORRISON, Hew, LL.D., 12 Blackford Road.
1922. MOSTYN-JONES, Rev. JOHN EDWARD, B.D., St Andrew's Vicarage, 45 Mortimer Road, De Beauvoir Town, London, N. 1.
- 1887.*MOURRAY, JOHN J., Naemoor, Rumbling Bridge.
1904. MOUNSEY, J. L., LL.D., W.S., Emeritus Professor of Conveyancing, University of Edinburgh, 24 Glencairn Crescent.
1897. MOXON, CHARLES, 77 George Street.
1889. MUIRHEAD, GEORGE, F.R.S.E., Commissioner for the Duke of Richmond and Gordon, Speybank, Fochabers.
1919. MUNRO, ALEXANDER, Craggie, Rogart, Sutherland.
1922. MUNRO, NEIL, LL.D., Cromalt, Helensburgh.
- 1911.*MURCHIE, JAMES, Penrioch, Kingcase, Prestwick, Ayrshire.
- 1878.*MURRAY, DAVID, M.A., LL.D., F.S.A., 169 West George Street, Glasgow.
1920. MURRAY, Captain H. W., late Technical Assistant, London Museum, Tintern House, Umbria Street, Roehampton, London, S.W. 15.
1920. MURRAY, JAMES, J.P., Bank Agent, Kenwood, Bishopbriggs, Glasgow.
1911. MURRAY, Captain KEITH R., B.A., Polraen, Sandplace, R.S.O., Cornwall.
1884. MURRAY, PATRICK, W.S., 7 Eton Terrace.
- 1905.*MURRAY, P. KEITH, W.S., 19 Charlotte Square.
- 1905.*NAISMITH, WILLIAM W., C.A., 57 Hamilton Drive, Glasgow.
- 1911.*NAPIER, GEORGE G., M.A., 9 Woodside Place, Glasgow.
1907. NAPIER, HENRY M., Milton House, Bowling.
1924. NAPIER, WALTER G., M.A., B.Sc., 5 Sciennes Gardens.
1923. NELSON, Mrs, Beechwood, Calderstones, Liverpool.
1923. NELSON, PHILIP, M.D., Ch.B., F.S.A., Beechwood, Calderstones, Liverpool.
1900. NEWLANDS, The Right Hon. LORD, LL.D., Mauldslee Castle, Carlisle.
1907. NICOLSON, DAVID, C.B., LL.D., M.D., Hanley, Park Road, Camberley, Surrey.
1922. NORRIE, WILLIAM, 156 Crown Street, Aberdeen.
1899. NOVAR, The Right Hon. Viscount, of Raith and Novar, G.C.M.G., LL.D., Raith, Kirkcaldy.
1922. OCHTERLONY, CHARLES FRANCIS, Metchley Cottage, Crumond Bridge, West Lothian.

1924. OGILVIE, JAMES D., Barloch, Milngavie.
 1921. OGILVY, THOMAS, 165 Princes Street, Dundee.
 1907.*OKE, ALFRED WILLIAM, B.A., F.L.S., 32 Denmark Villas, Hove, Sussex.
 1920. ORD, JOHN, 2 Monteith Row, Glasgow.
 1916. ORR, LEWIS P., F.F.A., Manager of the Scottish Life Assurance Co., 3 Belgrave Place.
 1921. ORR, STEWART, Corrie House, Corrie, Arran.
 1903. PARK, ALEXANDER, Ingleside, Lenzio.
 1917. PARK, FRANKLIN A., 149 Broadway, New York.
 1922. PATERSON, GEORGE DUNCAN, 3 Balgay Avenue, Dundee.
 1915. PATERSON, JOHN WILSON, M.B.E., A.R.I.B.A., Principal Architect, H.M. Office of Works, 11 Abinger Gardens.
 1924. PATON, JAMES, 80 High Street, Lanark.
 1891. PATON, VICTOR ALBERT NOEL, W.S., 31 Melville Street.
 1919. PATRICK, JOSEPH, M.A., C.A., Macdonallie, Lochwinnoch.
 1914. PATTERSON, T. BAKENDALE, L.D.S., Carisbrooke, 84 Station Road, Blackpool.
 1909. PAUL, ARTHUR F. BALFOUR, Architect, 16 Rutland Square.
 1871.*PAUL, SIR GEORGE M., LL.D., W.S., Deputy Keeper of the Signet, 16 St Andrew Square.
 1879. PAUL, SIR J. BALFOUR, C.V.O., LL.D., Lord Lyon King-of-Arms, 30 Heriot Row.
 1902.*PAULIN, SIR DAVID, F.F.A., 6 Forbes Street.
 1923. PAXTON, REV. WILLIAM, F.R.G.S., 7 Claremont, Bradford.
 1891. PEACE, THOMAS SMITH, Architect, Junction Road, Kirkwall.
 1913. PEACOCK, A. WEBSTER, Architect, 4 Bruntsfield Terrace.
 1923. PEARSON, REV. A. F. SCOTT, M.A., B.D., D.Th., F.R.Hist.S., The Manse, West Kilbride.
 1904. PEDDIE, ALEXANDER L. DICK, W.S., 13 South Leamouth Gardens.
 1922. PEIRCE, MISS NORMA L., 61 Anderson Street, Boston, Mass., U.S.A.
 1919. PENFOLD, HENRY, Bordersyde, Brampton, Cumberland.
 1916. PHILIP, ALEXANDER, LL.B., F.R.S.E., The Mary Acre, Brechin.
 1919. PHILLIPS, DAVID RHYS, F.L.A., Baili Glas, 15 Chaddesley Terrace, Swansea.
 1920. PLOWES, WILLIAM ROBERT, F.R.M.S., F.R.A.S., Chapel-Allerton, Leeds.
 1921. PORTER, Mrs BLACKWOOD, West Lodge, North Berwick.
 1901.*PORTLAND, His Grace The Duke of, K.G., Welbeck Abbey, Notts.
 1921. POWRIE, MRS, Earlie Bank, Craigie, Perth.
 1918. PRAIN, HENRY, J.P., Helenbank, Longforgan, by Dundee.
 1911.*PRESTON, FRANK A. R., M.R.S.I., M.S.A., Drumdarroch, 27 Ferguson Avenue, Milngavie.
 1905. PRICE, C. REES, Bannits, Broadway, Worcestershire.
 1906. PRINGLE, ROBERT, 11 Barnton Gardens, Davidson's Mains.
 1907. PULLAR, Major HERBERT S., Dunbarnie Cottage, Bridge of Earn.
 1919. PURSELL, JAMES, Elmhurst, Cramond Bridge.
 1912. QUICK, RICHARD, Curator of the Russell-Cotes Art Gallery and Museum, East Cliff, Bournemouth.
 1921. RAE, JOHN N., S.S.C., 2 Danube Street.
 1924. RAINY, GEORGE T., C.A., 5 Queen Street.
 1906. RAIT, ROBERT SANOSTER, C.B.E., LL.D., H.M. Historiographer in Scotland, Professor of Scottish History and Literature, Glasgow University, 31 Lilybank Gardens, Glasgow.
 1920. RAMSAY, SIR WILLIAM M., Hon. D.C.L. (Oxford), etc., 13 Greenhill Terrace.
 1908.*RANKIN, WILLIAM BLACK, of Cleddans, 55 Manor Place.
 1906. RAVEN, ALEXANDER JAMES, c/o The Capital and Counties Bank, Corshill, Ipswich.
 1909. REID, ALPHONSO STODART, Bank of England, Manchester.
 1897.*REID, REV. EDWARD T. S., M.A., Ravelston, 994 Great Western Road, Glasgow.
 1920. REID, Mrs, Lauriston Castle, Davidson's Mains.
 1920. REID, THOMAS, M.A., Arnold House, Lanark.
 1921.*RENNIE, JOHN, Wellcroft, Helensburgh.
 1917. RICHARDSON, REV. ANDREW T., Whyte's Causeway Manse, Kirkcaldy.
 1912.*RICHARDSON, JAMES S., Inspector of Ancient Monuments, H.M. Office of Works, 4 and 5 Drumsheugh Gardens.
 1923. RICHARDSON, JOHN, W.S., 17 India Street.
 1896. RICHARDSON, RALPH, W.S., Pitreavie Castle, Dunfermline.
 1919. RICHMOND, O. L., M.A., Professor of Humanity, University of Edinburgh, 5 Belford Place.

1922. RITCHIE, WILLIAM MUIR, 11 Walkinshaw Street, Johnstone.
1907. ROBB, JAMES, LL.B., 26 Ormidale Terrace.
- 1898.*ROBERTS, ALEXANDER F., Fairmile, Galashiels.
1905. ROBERTS, Sir JOHN, K.C.M.G., Littlebourne House, Dunedin, New Zealand.
1914. ROBERTS, J. HUBERT, F.R.G.S., F.S.I., F.A.I., 61 Wind Street, Swansea.
1916. ROBERTSON, ALAN KEITH, Architect, Viewpark, 12 Russell Place, Trinity.
1923. ROBERTSON, ALEXANDER MACLAREN, J.P., Rosemount, Arbroath.
1919. ROBERTSON, GEORGE M., M.D., F.R.C.P.E., Professor of Psychiatry, University of Edinburgh, Tipperlinn House, Morningside Place.
1910. ROBERTSON, JOHN, J.P., 27 Victoria Road, Dundee.
- 1886.*ROBERTSON, ROBERT, Holmlea, Dollar.
1915. ROBERTSON, ROBERT BURNS, Resident Architect, H.M. Office of Works, Windsor Castle, Windsor.
1905. ROBERTSON, W. G. AITCHISON, M.D., D.Sc., F.R.C.P.E., St Margaret's, Boscombe Manor Estate, Bournemouth.
1914. ROBISON, JOSEPH, 14 Castle Street, Kirkcubright.
- 1916.*RODGER, EDWARD, 1 Clairmont Gardens, Glasgow.
1921. ROGERSON, JOHN, I.A., A.R.I.B.A., 202 Hope Street, Glasgow.
1923. ROLLAND, Miss HELEN M., The Elms, Peebles.
1905. ROLLO, JAMES A., Solicitor, Argyle House, Maryfield, Dundee.
1924. ROSE, Sir H. ARTHUR, 23 Ainslie Place.
- 1872.*ROSEMARY AND MIDLOTHIAN, The Right Hon. The Earl of, K.G., K.T., D.C.L., LL.D., Dalmeny Park.
1876. ROSS, ALEXANDER, LL.D., Architect, Queensgate Chambers, Inverness.
1924. ROSS, DONALD, M.B., Tigh na Linne, Lochgilphead.
1922. ROSS, Major JOHN, Euroa, Langbank.
1891. ROSS, THOMAS, LL.D., Architect, 14 Saxe-Coburg Place.
1915. RUSK, J. M., S.S.C., Clinton House, Whitehouse Loan.
1906. RUSSELL, Rev. JAMES C., D.D., 9 Coates Gardens.
1914. RUSSELL, JOHN, 323 Leith Walk.
1923. St VIGEANS, The Hon. LORD, Chairman, Scottish Land Court, 2 West Coates.
1911. SAMUEL, Sir JOHN SMITH, K.B.E., 13 Park Circus, Glasgow, W.
1905. SANDS, The Hon. LORD, LL.D., 4 Heriot Row.
- 1903.*SATCE, Rev. A. H., M.A., LL.D., D.D., Professor of Assyriology, Oxford, 8 Chalmers Crescent, Edinburgh,—*Foreign Secretary*.
1912. SCLATER, Rev. HENRY GUY, The Rectory, Ballachulish, Argyll.
- 1910.*SCOBIE, Captain IAIN H. MACKAY, 1st Seaforth Highlanders, c/o Messrs Cox & Co., Charing Cross, London, S.W. 1.
1922. SCOTT, Rev. A. BOYD, M.C., B.D., Minister of Lansdowne Church, 18 Lilybank Gardens, Glasgow, W.
1922. SCOTT, GEORGE WAUGH, M.D., Sungei Siput, Perak, Federated Malay States.
1892. SCOTT, Sir JAMES, J.P., Rock Knowe, Tayport.
1903. SCOTT, JOHN, W.S., 13 Hill Street.
1901. SCOTT, J. H. F. KINNAIRD, of Gala, Gala House, Galashiels.
1923. SCOTT, KEITH STANLEY MALCOLM, M.B.E., B.Sc., Captain, R.E.T.A., 27 Osborne Road, Newcastle-upon-Tyne.
- 1921.*SCOTT, R. L., 11 Newark Street, Greenock.
1889. SCOTT-MONCHIEFF, W. G., M.A., Honorary Sheriff-Substitute of Lanarkshire, Whitechurch Rectory, Edgware, Middlesex.
1915. SCRYMGEOUR, NORVAL, Fellow of the Institute of Journalists, Helen Bank, Longforgan, by Dundee.
1920. SETON, Brevet-Colonel Sir BRUCE, of Abercorn, Bart., C.B., 12 Grosvenor Crescent.
1913. SHAND, J. HARVEY, W.S., 38 Northumberland Street.
1919. SHARP, ANDREW, 16 Lomond Road, Trinity.
1921. SHARP, MARTIN HOWARD, 35 Palmerston Place.
1917. SHAW, JULIUS ADOLPHUS, Mus.B., Trin. Coll. Dublin, L.Mus., T.C.L., 4 Grosvenor Road, Whalley Range, Manchester.
1918. SHAW, MACKENZIE S., W.S., 1 Thistle Court.
1917. SHAW, WILLIAM B., F.R.Hist.Soc., Honorary Curator of the Collections of the Presbyterian Historical Society of England, London, 56 Sandy Lane, Stretford, Manchester.
1908. SHEARER, JOHN E., 6 King Street, Stirling.
1920. SHEPPARD, THOMAS, M.Sc., F.G.S., F.R.G.S., Curator, The Municipal Museums, Hull.
1917. SHIELDS, COURTENAY JOHN, C.A., 17 Melville Street.
1913. SIM, Rev. GUSTAVUS AIRD, United Free Church Manse, Kirkcud, Peeblesshire.
- 1919.*SIMPSON, Professor JAMES YOUNG, D.Sc., F.R.S.E., 25 Chester Street.
1919. SIMPSON, WILLIAM DOUGLAS, M.A., D.Litt., 448 Great Western Road, Aberdeen.

1908. SINCLAIR, COLIN, M.A., F.R.I.B.A., St Margaret's, Ralston Avenue, Crookston, Renfrewshire.
1919. SINCLAIR, JOHN, Craighead Public School, Milton of Campsie, Stirlingshire.
1907. SKERRINGTON, The Hon. LORD, 12 Randolph Crescent.
1909. SKINNER, ROBERT TAYLOR, M.A., F.R.S.E., House Governor, Donaldson's Hospital.
1920. SLEIGH, THOMAS MILLAR, J.P., 38 Queen's Crescent.
1921. SMART, ROBERT SEMPLE, Journalist, St Hilda, Wotmit-on-Tay.
1922. SMEALL, THOMAS YOUNG, Solicitor, Castlewood, Jedburgh.
1922. SMITH, ALAN K., F.F.S., 29 Hermitage Gardens.
1922. SMITH, CAMPBELL, S.S.C., 19 Clarendon Crescent.
1910. SMITH, DAVID BAIRD, C.B.E., LL.D., 5 Windsor Terrace, Glasgow, W.
1892. SMITH, G. GREGORY, LL.D., Professor of English Literature, The University, Belfast.
1922. SMITH, JAMES MACDONALD, Innisfree, Colinton.
1923. SMITH, SIR MALCOLM, K.B.E., Clifton Lodge, Boswall Road, Leith.
1923. SMITH, WILLIAM JAMES, M.C., A.R.I.B.A., Lecturer on Architecture and Building, The Royal Technical College, Glasgow; 5 Rhannan Road, Cathcart, Glasgow.
- 1892.*SMYTHE, Colonel DAVID M., Moulinalmund, Almondbank, Perthshire.
1921. SOUTAR, CHARLES GEDDES, F.R.I.B.A., 15 South Tay Street, Dundee.
- 1910.*SPENCER, Colonel CHARLES LOUIS, C.B.E., D.S.O., 5 Great Western Terrace, Glasgow.
- 1910.*SPENCER, JOHN JAMES, 5 Great Western Terrace, Glasgow.
1922. SPENS, THOMAS PATRICK, W.S., 25 Park Circus, Glasgow.
- 1903.*STARKE, Rev. WILLIAM A., Church Place, Castle Douglas, Kirkcudbright.
1923. STABLEY, JOHN KEMP, The Manor House, Ryton-on-Dunsmore, Coventry.
1923. STEEDMAN, J. W. E., S.S.C., Braighleacainn, Oban.
1923. STEPHEN, FREDERICK S., Scotseraig, Tayport, Fife.
1920. STEPHEN, Rev. WILLIAM, B.D., The Manse, Inverkeithing.
1901. STEUART, A. FRANCIS, Advocate, University Club, 127 Princes Street.
1902. STEUART, JAMES, O.B.E., W.S., 25 Rutland Street.
1922. STEUART, Mrs MACKENZIE, c/o G. M. STEUART, Esq., 6 St Andrew Square.
1912. STEVENSON, DAVID, Firenze, 93 Trinity Road.
1895. STEVENSON, JOHN HORNE, M.B.E., K.C., 9 Oxford Terrace.
1913. STEVENSON, NORMAN, Dechmont View, Sandyhills, Shettleston.
1913. STEVENSON, PERCY R., 5 North Charlotte Street.
1922. STEWART, ANDREW, H.M. Inspector of Taxes, 2 Caird Drive, Partick.
1916. STEWART, CHARLES, W.S., 28 Coates Gardens.
1922. STEWART, CHARLES, C.A., 306 Broughty Ferry Road, Dundee.
1879. STEWART, CHARLES POYNTZ, Chesfield Park, Stevenage.
1924. STEWART, FREDERICK W. D., M.A., The Schoolhouse, Corstorphine.
- 1917.*STEWART, JOHN ALEXANDER, 104 Cheapside Street, Glasgow.
1913. STEWART, R. RANNOCH, Ashbourn, Grove Park, Lenzie.
1885. STEWART, Colonel Sir ROBERT KING, K.B.E., Murdostoun Castle, Newmains, Lanarkshire.
1920. STEWART, WILLIAM RITCHIE, Merriek, Dalmellington, Ayrshire.
1908. STIRTON, Rev. JOHN, B.D., The Manse, Crathie, Ballater.
1922. STRINGER, E. W. SCOBIE, M.R.H.S., 54 Warren Road, Wanstead, London, E. 11.
1910. STRUTHERS, Sir JOHN, K.C.B., LL.D., 31 Sloane Gardens, London, S.W.
1897. SULLEY, PHILIP, 38 Netherby Road, Trinity.
1922. SUTHERLAND, ALEXANDER, Ramyards, Watten, Caithness.
1923. SUTTEL, ARNOLD, M.R.S.I., Hillcroft, Wetherby Lane, Harrogate.
1897. SUTTIE, GEORGE C., J.P., of Lalathan, Alma Lodge, St Cyrus, by Montrose.
1916. SWAN, T. AIKMAN, A.R.I.B.A., 42 Frederick Street.
1900. SWINTON, Captain GEORGE S. C., 45 Sussex Gardens, London, W. 2.
1916. TAIT, EDWYN SEYMOUR REID, 82 Commercial Street, Lerwick.
1910. TAIT, GEORGE HOPE, 26 High Street, Galashiels.
1917. TAYLOR, FRANK J., Assistant Secretary, Young Men's Christian Association, Newcastle-on-Tyne.
1923. TEMPLE, HERBERT W. FORRESTER, Union Bank House, Tarland, Aberdeenshire.
1902. THIN, ROBERT, M.A., M.B., C.M., 25 Abercromby Place.
1920. THOMPSON, Rev. GEORGE, M.A., B.D., T.D., J.P., The Manse, Carnbee, Pittenweem.

- 1906.*THOMSON, DAVID COUPER, J.P., D.L., Inveravon, Broughty Ferry.
- 1921.*THOMSON, EDWARD JOHN, 6 Windsor Terrace West, Kelvinside, Glasgow.
1920. THOMSON, GEORGE CLARK, Barrister-at-Law, Swift Current, Saskatchewan, Canada.
1911. THOMSON, JAMES, M.A., LL.B., Solicitor, 1 West Bell Street, Dundee.
1913. THOMSON, JAMES, The Cedars, 21 Fortis Green, East Finchley, London, N.2.
1918. THOMSON, JAMES GRAHAME, 120 Maxwell Drive, Pollokshields, Glasgow.
1922. THOMSON, JOHN, 9 Carlton Gardens, Glasgow, N.W.
1913. THOMSON, JOHN GORDON, S.S.C., 54 Castle Street.
1923. THOMSON, THEODORE RADFORD, B.A. (Cantab.), M.R.C.S. (Eng.), 4 Galveston Road, Putney, London.
1921. THOMSON, THOMAS SAMUEL, 18 Rothesay Place.
1922. THOMSON, WILLIAM, Rosyth, Margaret Drive, South Govan.
1910. THOMSON, WILLIAM N., Architect, 85 Constitution Street, Leith.
1898. THORBURN, MICHAEL GRIEVE, Glenormiston, Innerleithen.
1911. THORBURN, Lt.-Col. WILLIAM, O.B.E., Boreland, Lockerbie, Dumfriesshire.
1907. THORP, JOHN THOMAS, LL.D., Brunswick House, 54 Princess Road, Leicester.
1910. TODD, HENRY GUICHARDE, Architect (no address).
- 1902.*TRAILL, H. LIONEL NORTON, F.R.G.S., Capt. 4th Highland Light Infantry, Grattan Lodge, Vicars-town, Stradbally, Queen's County, Ireland.
1917. TRAILL, WILLIAM, C.E., Tankerness House, Kirkwall, Orkney.
1922. TROTTER, GEORGE CLARK, M.D., Ch.B. (Edin.), D.P.H. (Aberd.), F.R.S.E., "Braemar," Haslemere Road, Crouch End, London, N. 8.
1922. TURNBULL, JOHN W., Kilbride, Millhouse, Argyll.
1901. TURNBULL, W. S., Aikenshaw, Roseneath.
- 1917.*URQUHART, ALASTAIR, D.S.O., 13 Danube Street.
1921. URQUHART, EDWARD A., 11 Queensberry Street.
- 1878.*URQUHART, JAMES, N.P., 13 Danube Street.
- 1905.*USHER, Sir ROBERT, Bart., of Norton and Wells, Wells, Hawick.
- 1920.*VARMA, Professor S. P., M.A., of Robertson College, Jubbulpore, C.P., India, c/o Messrs Thomas Cook & Son, Ludgate Circus, London, E.C. 4.
1922. VEITCH, HENRY NEWTON, 30 Coleherne Court, London, S.W. 5.
1922. VOGEL, Mrs. 4 Cluny Avenue.
1904. WADDELL, JAMES ALEXANDER, of Leadloch 12 Kew Terrace, Glasgow, W.
1921. WADDELL, J. JEFFREY, Architect, Caldergrove, Hallside, Lanarkshire.
1909. WALKER, JOHN, M.A., c/o Messrs Bowie & Pinkerton, S.S.C., 2 Stafford Street.
1924. WALKER, W. GLASSFORD, C.A., 2 Denham Green Avenue, Trinity.
1879. WALLACE, THOMAS, Station House, Culloden Moor, Inverness-shire.
1915. WARD, The Venerable Archdeacon ALGERNON, M.A. (Cantab.), F.R.S.L., The Vicarage, Stowe, Bampton Bryan, Salop.
1921. WARD, EDWIN, Keeper of the Art and Ethnological Departments, Royal Scottish Museum, 52 Albany Street.
1917. WARNER, Rev. GRAHAM NICOLL, M.A., The Manse, Bervie, Kincardineshire.
1919. WARR, Rev. CHARLES LAING, M.A., St Paul's Parish Church, 70 Union Street, Greenock.
- 1917.*WARRACK, JOHN, 13 Rothesay Terrace.
1923. WARRACK, MALCOLM, 7 Oxford Terrace.
1916. WATERSON, DAVID, R.E., Bridgend House, Brechin.
1904. WATLING, H. STEWARD, Architect, Manor Close, Cordwall Road, Harrogate.
- 1907.*WATSON, CHARLES B. BOGG, F.R.S.E., Huntly Lodge, 1 Napier Road.
1924. WATSON, GEORGE MACKIE, Architect, 50 Queen Street.
1913. WATSON, G. P. H., Architect, Royal Commission on Ancient and Historical Monuments of Scotland, 4 Drumsheugh Gardens, — Secretary.
1922. WATSON, HENRY MICHAEL DENNE, C.A., 12 Henderland Road.
- 1908.*WATSON, JOHN PARKER, W.S., Greystane, Kinellan Road, Murrayfield.
1904. WATSON, WALTER CRUM, B.A. Oxon., Northfield, Balerno.
1912. WATSON, WILLIAM J., M.A., LL.D., F.R.S.E., Professor of Celtic Languages, Literature and Antiquities, University of Edinburgh, 8 Spence Street.
- 1907.*WATT, JAMES, W.S., F.F.A., Craiglockhart House, Slateford, Midlothian.
1908. WATT, Rev. LAUCHLAN MACLEAN, M.A., B.D., D.D., 1 Athole Gardens, Glasgow, W.

1923. WATT, WILLIAM J. C., M.B., Ch.B., 71 High Street, Paisley.
1920. WAUGH, PERCIVAL, 21 Cluny Gardens.
1879. WEDDERBURN, J. R. M., M.A., W.S., 3 Glencairn Crescent.
- 1884.*WHITE, CECIL, 23 Drummond Place.
1914. WHITE, GEORGE DUNCAN, Seaforth, 15 Marketgate, Crail.
1904. WHITE, JAMES, St Winnin's, Bearsden, Dumbartonshire.
1916. WHITE, JOHN, 18a Arthur Street, Pilrig, Leith.
1903. WHITELAW, ALEXANDER, Gartshore, Kirkintilloch.
- 1902.*WHITELAW, CHARLES EDWARD, I.A., The Laurels, Bridge of Weir, Renfrewshire.
1907. WHITELAW, HARRY VINCENT, Elmhurst, Totnes Road, Paignton, Devon.
1909. WHITTAKER, CHARLES RICHARD, F.R.C.S., F.R.S.E., Lynwood, 27 Hatton Place.
1913. WHITTAKER, Professor EDMUND T., M.A., Hon. D.Sc., F.R.S., 35 George Square.
1923. WHITE, WILLIAM, P.O. Box 1831, Johannesburg, S. Africa.
1921. WILKIE, ALEXANDER, 5 Ravelston Terrace.
1908. WILKIE, JAMES, B.L., S.S.C., 108 George Street.
1895. WILLIAMS, Rev. GEORGE, Minister of Norrieston U.F. Church, Thornhill, Perthshire.
1897. WILLIAMS, H. MALLAM, Tilehurst, Southern Road, Southbourne, Hants.
1908. WILSON, ANDREW ROBERTSON, M.A., M.D., 23 Hoseside Road, Wallasey, Cheshire.
- 1923.*WILSON, Rev. S. GORDON F., M.A., B.Litt., A.K.C., F.R.Hist.S., Holy Trinity Vicarage, Gravesend, Kent.
1913. WILSON, Rev. THOMAS, B.D., The Manse, Stow, Midlothian.
1921. WILSON, WILLIAM, Regius Professor of Public Law, The University, Edinburgh.
1912. WILSON, Rev. W. B. ROBERTSON, Strathdevon, Dollar.
1916. WINDUST, Mrs ESTHER, Sidi-Bou-Sakl, near Tunis, N. Africa.
1920. WISHART, DAVID, Pittarrow, Abernethy, Perthshire.
1922. WOOD, J. MAXWELL, M.B., C.M. (Edin.), 3 Comely Bank.
1922. WOOD, J. R., 51 Montgomerie Street, Kelvinside N., Glasgow.
1907. WOOD, WILLIAM JAMES, J.P., 206 George Street, Glasgow.
1903. WRIGHT, Rev. FREDERICK G., D.D., Barholm Vicarage, Stamford.
1913. YOUNG, THOMAS E., W.S., Auchterarder.
1924. YOUNGER, HARRY J., Hargmeny, Balerno, Midlothian.
- 1912.*YULE, THOMAS, W.S., 16 East Claremont Street.

SUBSCRIBING LIBRARIES, ETC.

- American Philosophical Society.
- Baillie's Institution, Glasgow.
- Birmingham Public Libraries—Reference Department.
- *Columbia University.
- Concordia College, Moorhead, Minn., U.S.A.
- Department of British and Mediæval Antiquities, British Museum.
- Falkirk Natural History and Archæological Society.
- Free Public Library, Boston, Massachusetts, U.S.A.
- Harvard College, U.S.A.
- Institute of Accountants and Actuaries in Glasgow.
- John Rylands Library, Manchester.
- National Museum of Wales, Cardiff.
- Public Library, Aberdeen.
- Public Library, Dundee.
- Public Library of Victoria, Melbourne, Australia.
- Reform Club, Pall Mall, London, S.W. 1.
- State Historical Society of Wisconsin, Madison, Wisconsin, U.S.A.
- University College, Dublin.
- University Library, Leeds.
- University of Michigan.
- University of Pennsylvania, Philadelphia, Pa., U.S.A.
- Victoria University of Manchester.
- Yale University Library, New Haven, Connecticut, U.S.A.

LIST OF THE CORRESPONDING MEMBERS OF THE SOCIETY OF ANTIQUARIES OF SCOTLAND.

NOVEMBER 30. 1924.

- | | |
|---|---|
| 1923. BLACK, GEORGE F., Ph.D., New York Public Library, New York City, U.S.A. | 1904. MACKIE, ALEX., Pitressie Abernethy. |
| 1922. FAIRBAIRN, ARCHIBALD, Wellwood, Muirkirk, Ayrshire. | 1915. MATHIESON, JOHN, F.R.S.E., 42 East Claremont Street. |
| 1913. FRASER, JOHN, 68 Restalrig Road, Leith. | 1915. MORRISON, MURDO, Lakesfield, Bragar, Lewis. |
| 1911. GOUDIE, JAS. M., J.P., Lerwick, Shetland. | 1911. NICOLSON, JOHN, Nybster, Auchengill, by Wick, Caithness. |
| 1913. LEVY, Mrs N., Red Gables, Carson College, Flouertown, Pa., U.S.A. | 1903. RITCHIE, JAMES, Hawthorn Cottage, Port Elphinstone, Inverurie. |
| 1908. MACKENZIE, WILLIAM, Procurator-Fiscal, Dingwall. | 1921. URQUHART, ANDREW, M.A., J.P., The School house, Bonar Bridge, Sutherland. |

LIST OF HONORARY FELLOWS
OF THE
SOCIETY OF ANTIQUARIES OF SCOTLAND,
NOVEMBER 30, 1924.

[According to the Laws, the number is limited to TWENTY-FIVE.]

1885.

Dr ERNEST CHANTRE, The Museum, Lyons.

1892.

Professor LUIGI FIGORINI, Director of the Royal Archæological Museum, Rome.

1897.

Sir W. M. FLINDERS PETRIE, D.C.L., LL.D., F.B.A., F.R.S., Edwards Professor of Egyptology in University College, London, W.C. 1.

Dr SOPHUS MÜLLER, Secretary of the Royal Society of Northern Antiquaries, and Director of the National Museum, Copenhagen.

1908.

5 Sir ARTHUR JOHN EVANS, M.A., D.C.L., Youlbury, near Oxford.

SALOMON REINACH, Director of the National Museum of Antiquities of France, St Germain-en-Laye.

Professor H. DRAGENDORFF, Freiburg i. Baden, Johan von Weirhstrasse 4.

Professor E. RITTERLING, Director of the Römisch-Germanische Kommission, Dotzheimerstrasse 38^{III} Wiesbaden.

1919.

LÉON COUTIL, Correspondant du Ministère de l'Instruction Publique, etc., etc., Les Andelys, Eure, France.

10 RENÉ CAGNAT, Secrétaire Perpétuel de l'Académie des Inscriptions et Belles Lettres, Professeur au Collège de France, Palais de l'Institut (3 rue Mazarine), Paris.

1921.

The Right Rev. Bishop G. F. BROWNE, 2 Campden House Road, Kensington, London, W. 8.

1923.

M. L'ABBÉ H. BREUIL, D.L.C., Professeur à l'Institut de Paléontologie Humaine, Paris, 110 Rue Demours, Paris.

Professor FRANZ CUMONT, 19 Corso d'Italia, Rome.

G. F. HILL, M.A., F.B.A., LL.D., Keeper of Coins and Medals, British Museum, London, W.C. 1.

15 Dr BERNHARD SALIN, State Antiquary-in-Chief, Stockholm.

FRANK GERALD SIMPSON, 23 Princess Royal Terrace, Scarborough.

Mrs ARTHUR STRONG, Litt.D., LL.D., F.S.A., Life-Fellow of Girton College, Cambridge, and Assistant Director of the British School at Rome, Valle Giulia, Rome

A. M. TALLOREN, Professeur à l'Université, Dorpat, Esthonia.

LIST OF THE LADY ASSOCIATES
OF THE
SOCIETY OF ANTIQUARIES OF SCOTLAND,
NOVEMBER 30, 1924.

[According to the Laws, the number is limited to TWENTY-FIVE.]

1894.

Miss EMMA SWANN, Walton Manor, Oxford.

1900.

Miss M. A. MURRAY, Edwards Library, University College, London, W.C. 1.
3 Mrs E. S. ARMITAGE, Westholm, Rawdon, Leeds.

SOCIETIES, INSTITUTIONS, &c., EXCHANGING PUBLICATIONS.

Architectural, Archæological, and Historic Society
of Chester and North Wales.
Berwickshire Naturalists' Club.
Bristol and Gloucestershire Archæological Society.
British Archæological Association.
Buchan Field Club.
Buteshire Natural History Society.
Cambrian Archæological Association.
Cambridge Antiquarian Society.
Cumberland and Westmorland Antiquarian and
Archæological Society.
Derbyshire Archæological and Natural History
Association.
Dumfriesshire Natural History and Antiquarian
Society.
Edinburgh Architectural Association.
Elgin Literary and Scientific Society.
Essex Archæological Society.
Gaelic Society of Inverness.
Geological Society of Edinburgh.
Glasgow Archæological Society.
Hampshire Field Club and Archæological Society.
Hawick Archæological Society.
Historic Society of Lancashire and Cheshire.
Institute of Archæology, Liverpool.
Kent Archæological Society.
New Spalding Club.
Perthshire Society of Natural Science.
Royal Anthropological Institute.
Royal Archæological Institute of Great Britain
and Ireland.
Royal Commission on Ancient and Historical
Monuments of Scotland.
Royal Commission on the Ancient and Historical
Monuments and Constructions in Wales and
Monmouthshire.

Royal Historical Society.
Royal Irish Academy.
Royal Numismatic Society.
Royal Society of Antiquaries of Ireland.
Scottish Ecclesiological Society.
Shropshire Archæological Society.
Society for the Promotion of Roman Studies.
Society of Antiquaries of London.
Society of Antiquaries of Newcastle-upon-Tyne.
Society of Architects.
Somersetshire Archæological and Natural History
Society.
Stirling Natural History and Archæological Society.
Surrey Archæological Society.
Sussex Archæological Society.
Thoresby Society.
Viking Club.
Wiltshire Archæological Society.
Yorkshire Archæological Society.

Archæological Survey of India.
British School at Rome.
Colombo Museum, Ceylon.
Provincial Museum, Toronto, Canada.
Royal Canadian Institute, Toronto.
University Museum, Dunedin, New Zealand.

FOREIGN SOCIETIES, UNIVERSITIES, MUSEUMS, &c.

Académie des Inscriptions et Belles Lettres, Paris.
Alterthumsgesellschaft, Königsberg.
Anthropologische Gesellschaft, Vienna.
Antiquarische Gesellschaft, Zürich.
Bosnisch-Herzegovinisches Landes-Museum, Sara-
jevo.

Bureau of Ethnology, Washington.
 California University.
 Christiania University.
 Commissione Archeologica Comunale di Roma.
 Cornell University Library, Ithaca, New York.
 Ecole d'Anthropologie de Paris.
 Faculté des Sciences de Lyon.
 Foreningen til Norske Fortidsminde-merkens
 Bevaring.
 Gesellschaft für Nützliche Forschungen, Trier.
 Göteborg och Bohusläns Fornminnesföreningen.
 Göttingen University.
 Historische und Antiquarische Gesellschaft, Basel.
 Historische Verein für Niedersachsen.
 Institut de Paléontologie Humaine, Paris.
 Junta Superior de Excavaciones y Antigüedades,
 Madrid.
 Junta Para Ampliación de Estudios—Comision de
 Investigaciones Paleontológicas y Prehistóricas,
 Madrid.
 Kiel University.
 Kongelige Norske Videnskabers Selskab, Trondhjem.
 Leipzig University.
 Musée Guimet, Paris.
 Musée National Suisse à Zürich.
 Museum, Bergen, Norway.
 Museum of Northern Antiquities, Oslo.
 National Bohemian Museum, Prague, Czecho-
 Slovakia.
 National Museum, Zagreb, Yugoslavia.
 Nordiska Museet, Stockholm.
 Norsk Folkemuseum, Oslo.
 Notgemeinschaft der Deutschen, Wissenschaft,
 Berlin.
 Peabody Museum, Cambridge, Mass., U.S.A.
 Prähistorische Kommission der Kaiserliche
 Akademie der Wissenschaften in Wien.
 Reale Accademia dei Lincei, Rome.
 Rijks-Museum van Oudheden, Leiden.
 Römisch-Germanische Kommission des Deut-
 schen Archaeologischen Instituts, Frankfurt
 am Main.
 Royal Academy of History and Antiquities,
 Stockholm.
 Royal Society of Northern Antiquaries, Copen-
 hagen.
 Smithsonian Institution, Washington, U.S.A.
 Societa Romana di Antropologia, Rome.
 Société d'Anthropologie de Paris.

Société des Antiquaires de l'Ouest.
 Société Archéologique d'Alexandrie.
 Société Archéologique de Constantine, Algeria.
 Société Archéologique du Midi de la France.
 Société Archéologique de Montpellier.
 Société Archéologique de Moravie.
 Société Archéologique de Namur.
 Société des Bollandistes, Brussels.
 Société des Sciences de Semur (*Pro Alesia*).
 Société Finlandaise d'Archéologie, Helsingfors.
 Société d'Histoire et d'Archéologie de Gand.
 Société Nationale des Antiquaires de France.
 Société Préhistorique Polonaise.
 Société Royale d'Archéologie de Bruxelles.
 Städtisches Museum für Völkerkunde, Leipzig.
 University Library, Tartu, Estonia.
 Upsala University.
 Verein für Nassauische Alterthumskunde, Wies-
 baden.
 Verein von Alterthumsfreunden im Rheinlande,
 Bonn.
 Wiener Præhistorische Gesellschaft.

PERIODICALS.

L'Anthropologie, Paris.
Bulletin archéologique polonaise, Warsaw.

LIBRARIES, BRITISH.

Advocates' Library, Edinburgh.
 Athenæum Club Library, London.
 Bodleian Library, Oxford.
 British Museum Library.
 Chetham's Library, Manchester.
 Faculty of Procurators' Library, Glasgow.
 Free Library, Edinburgh.
 Free Library, Liverpool.
 Mitchell Library, Glasgow.
 National Library of Wales, Aberystwyth.
 Ordnance Survey Library, Southampton.
 Public Record Office Library, London.
 Royal Library, Windsor.
 Royal Scottish Museum Library, Edinburgh.
 Scottish National Portrait Gallery Library.
 Scottish Record Office, Historical Department.
 Signet Library, Edinburgh.
 Trinity College Library, Dublin.
 United Free Church College Library, Edinburgh.

University Library, Aberdeen.
 University Library, Cambridge.
 University Library, Edinburgh.
 University Library, Glasgow.
 University Library, St Andrews.
 Victoria and Albert Museum Library, London.

LIBRARIES, FOREIGN.

Bayerische Staats-bibliothek, Munich, Bavaria.

Bibliothèque d'Art et d'Archéologie, Université de
 Paris.
 National Library, Paris.
 National Library, Vienna.
 Newberry Library, Chicago, U.S.A.
 Preussische Staats-bibliothek, Berlin.
 Public Library, Hamburg.
 Royal Library, Copenhagen.
 Royal Library, Stockholm.
 Sächsische Landes-bibliothek, Dresden.

PROCEEDINGS
OF THE
SOCIETY OF ANTIQUARIES OF SCOTLAND

HUNDRED AND FORTY-FOURTH SESSION, 1923-1924

ANNIVERSARY MEETING, 30th November 1923.

GEORGE MACDONALD, C.B., F.B.A., LL.D., D.LITT.,
in the Chair.

Before proceeding with the ordinary business, Dr George Macdonald made the following allusion to the late Dr George Neilson :—

“In the balloting paper which you hold in your hands, the first name on the list of those recommended by the Council for the office of Vice-President is that of Dr George Neilson. Unhappily, you cannot vote for him now. Before the recommendation had time even to reach you, Dr Neilson had passed from the circle of our Fellowship for ever. There are many to whom his going must make the world seem a much emptier and poorer place. It is thirty-two years since he joined this Society. The public position which he held required him to be in Glasgow at an hour of the day so early that he was seldom able to take part in our evening meetings. But you showed the esteem in which you held him by repeatedly electing and re-electing him to the Council, and, so long

as his health permitted, he did his utmost to attend regularly, often at considerable inconvenience to himself. I am sure I speak for all his colleagues when I say that at the Council table no presence could have been more welcome. His geniality of manner, his sincerity of purpose, his native kindliness, his unaffected modesty, were indeed calculated to win friends for him everywhere. These are the qualities which one most readily recalls at a moment when the sharp sense of personal loss is still fresh and unblunted. Admirable as they were, however, it may be that they sometimes blinded casual observers to his real intellectual eminence. That is perhaps why he did not always receive in his own country the full meed of honour that was his due.

"His was certainly one of the acutest minds that have ever been applied to the study of Scottish history and antiquities. And not the least noteworthy of his many gifts was his power of lucid exposition, his easy mastery of a singularly attractive and forcible English style. The range of his interests was equally remarkable. A mediæval scholar and antiquary of rare distinction, he was also the author of one of the most stimulating little books that have ever been written about the Roman remains in Northern England. I have heard him say that he was "a mere intruder into the Roman period." Yet he will long be remembered as a pioneer in the scientific study of the Antonine Wall. Some of us used to regret his return to the Middle Ages. But it was in the Middle Ages that he had originally won his spurs by his classic treatise on *Trial by Combat*, and it was undoubtedly there that his heart lay. No one could decipher a charter more rapidly or grasp its implications more surely. For those who were privileged to know him well, it was a sheer delight to watch the keenness with which his eager, questioning spirit would search out and follow up a clue. He has thrown new light on many subjects, from Norman motes and Border peels to the origins of the Court of Session and the fable of the Englishmen with tails. Where so much is good, it is difficult to single out any one of his writings for special mention. In his later days he himself would perhaps have set most store by his *Introduction to the Acts of the Lords of Council*. Others may think rather of his *Annals of the Solway*, or of his charming account of *Repentance Tower and its Tradition*, both of them peculiarly characteristic through the testimony which they bear to his deep-seated affection for the countryside where he was born and bred. But, whatever our individual preferences may be, it is safe to say that on every topic which he touched he has left a mark that is destined to endure."

Dr Macdonald moved, and it was agreed, that the Society should record their deep sense of the loss they had suffered through Dr Neilson's

death and their sympathy with his family, and the Secretary was instructed to forward an excerpt from the Minutes to Mrs Neilson.

Sir James Balfour Paul, C.V.O., LL.D., and Mr James MacLehose, LL.D., were appointed Scrutineers of the Ballot for Office-Bearers.

The Ballot having been concluded, the Scrutineers found and declared the List of the Council for the ensuing year to be as follows:—

President.

His Grace The DUKE OF ATHOLL, K.T., C.B., M.V.O., D.S.O., LL.D.

Vice-Presidents.

Professor THOMAS H. BRYCE, M.D., F.R.S.

Sir ANDREW N. AGNEW, Bart.

Lieut.-Col. W. ANSTRUTHER-GRAY.

Councillors.

Sir JOHN R. FINDLAY, K.B.E., LL.D.	} <i>Representing the Board of Trustees.</i>	Brigadier-General R. G. GORDON.
The Hon. HEW HAMIL- TON DALRYMPLE.		GILMOUR, C.B., C.V.O., D.S.O.
Sir JAMES ADAM, C.B.E.	} <i>Representing the Treasury.</i>	The Right Hon. LORD ABERCROMBY, LL.D.
JAMES URQUHART.		JAMES GARSON, W.S.
JOHN BRUCE.		JAMES S. RICHARDSON.
Colonel CHARLES L. SPENCER, C.B.E., D.S.O.		THOMAS YULE, W.S.
		VICTOR A. NOEL PATON, W.S.

Secretaries.

G. P. H. WATSON. | DOUGLAS P. MACLAGAN, W.S.

For Foreign Correspondence.

The Rev. Professor A. H. SAYCE, M.A., | Professor G. BALDWIN BROWN.
LL.D., D.D.

Treasurer.

J. BOLAM JOHNSON, C.A.

Curators of the Museum.

JAMES CURLE, W.S. | ALEXANDER O. CURLE.

Curator of Coins.

GEORGE MACDONALD, C.B., F.B.A., LL.D., D.Litt.

Librarian.

WILLIAM K. DICKSON, LL.D.

A Ballot having been taken, the following were elected Fellows:—

ALEXANDER CAMPBELL, Commercial Bank of Scotland, Ltd., Abington.

EDWARD MAITLAND CAMPBELL, B.A. (Cantab.), 25 Moray Place.

JOHN SMITH CLARKE, 5 George Drive East, Linthouse, Glasgow.

Lieut.-Colonel GEORGE CAMPBELL GRAHAME of Over Glenlynn, Ingleholm, North Berwick.

EDWARD ATKINSON HORNEL, Broughton House, Kirkcudbright.

QUENTIN H. I. IRVINE, Barra Castle, Old Meldrum, Aberdeenshire.

BELLERBY LOWERISON, Ruskin School, Heacham, Norfolk.

Miss JANE C. C. MACDONALD, Ballintuim House, Blairgowrie.

ALEXANDER G. R. MACKENZIE, F.R.I.B.A., Lower Woodend, Marlow, Bucks.

Rev. WILLIAM PAXTON, F.R.G.S., 7 Claremont, Bradford.

Miss HELEN M. ROLLAND, The Elms, Peebles.

The Hon. LORD ST VIGEANS, Chairman, Scottish Land Court, 2 West Coates.

Sir MALCOLM SMITH, K.B.E., Clifton Lodge, Boswall Road, Leith.

FREDERICK S. STEPHEN, Scotsraig, Tayport, Fife.

Mrs T. GOODALL THOMSON, 5 Abercromby Place.

THOMAS GOODALL THOMSON, 5 Abercromby Place.

The following list of Members deceased since the last Annual General Meeting was read:—

Corresponding Member.

MUNGO BUCHANAN, 23 South Alma Street, Falkirk	Elected, 1900
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Fellows.

ROBERT ANGUS, D.L., Ladykirk, Monkton, Ayrshire	Elected, 1894
ROBERT P. LEE BOOKER, Elmbridge Green, Droitwich, Worcestershire	1905
ROBERT COLTMAN CLEPHAN, Marine House, Tynemouth	1903
CHARLES J. COURTNEY, Librarian, Minet Public Library, Knatchbull Road, Myatt's Fields, London	1901
JAMES HENRY CUNNINGHAM, C.E., 2 Ravelston Place	1891
JOHN MARR DAVIDSON, Braedale, Lanark	1909
JOHN FLEMING, 9 Woodside Crescent, Glasgow	1908

ANNIVERSARY MEETING.

5

	Elected.
GEORGE GRAY, Town Clerk of Rutherglen, Threshrig, Blairbeth Road, Rutherglen	1911
GEORGE LOWSON, LL.D., 22 Briarbank Terrace	1904
JAMES MACDONALD, W.S., Rannas, Cramond Bridge	1879
WILLIAM RAE MACDONALD, F.F.A., The Albany Herald, Neidpath, 4 Wester Coates Avenue	1890
Rev. CHARLES DOUGLAS MACINTOSH, M.A., Minister of St Oran's Church, Tigh-na-creige, Connel	1898
Rev. DONALD MACRAE, B.D., The Manse, Edderton, Ross-shire	1908
GEORGE NEILSON, LL.D., Wellfield, 76 Partickhill Road, Glasgow	1891
ALEXANDER ORROCK, 14 Lauder Road	1908
JAMES K. PATTERSON, Ph.D., LL.D., President Emeritus, State University of Kentucky, Lexington, Kentucky, U.S.A.	1880
ROBERT SCOTT-MONCRIEFF, W.S., 10 Randolph Cliff	1907
Rev. THOMAS SINTON, D.D., Minister of Dores, Inverness-shire	1910
Major T. COKE SQUANCE, M.D., M.S., F.R.S.E., F.R.M.S., The Cottage, Newbiggin, Aysgarth, Yorkshire	1913
Major-General T. R. STEVENSON, C.B., Sunnyside, Lanark	1904
Rev. H. J. SWALLOW, Hawthornden, 23 Grand Avenue, West South- bourne, Bournemouth	1884

The meeting resolved to record their sense of the loss the Society had sustained in the death of these members.

The Secretary read the following Report by the Council on the affairs of the Society for the year ending 30th November 1923, which, on the motion of the Chairman, was unanimously adopted:—

The Council beg to submit to the Fellows of the Society their Report for the year ending 30th November 1923.

Fellowship.—The total number of Fellows on the roll at 30th November 1922 was 750
At 30th November 1923 the number was 824
being an increase of 74

During the year 102 new Fellows were elected, while 21 Fellows died, 5 resigned, and 2 allowed their membership to lapse.

The number of new Fellows who joined the Society last Session is by far the largest in any year since its inception. The Council consider that this noteworthy fact may in some measure be regarded as evidence of the appreciation by the public of the value of the research which the Society undertakes. In 1901 Sir Arther Mitchell, in his address reviewing fifty years' work of the Society, expressed the opinion that a Fellowship

of about 700 was near the limit of what Scotland could supply. Although that number has now been considerably exceeded, it is felt that, in view of the increasing interest that is being aroused in archæology by discoveries at home and abroad—an interest that is stimulated through the friendly co-operation of the Press—a further considerable accession to our membership might be obtained by Fellows suggesting to those who care for the history and archæology of Scotland the desirability of joining. The greater the number of Fellows, the greater will be the Society's influence for the preservation of the ancient monuments of Scotland, for the recovery of relics, and for extending the influence of our National Museum of Antiquities.

In the list of those deceased since the last General Meeting occur the names of several to whom the Council desire to make special reference.

Robert Scott-Moncrieff, W.S., who became a Fellow in 1907, was appointed one of the Secretaries in 1908, and held office until his death in January 1923—the long period of fourteen years. A student and a competent business man, he had a nice taste in letters, and was, above all, a most lovable friend. He had many interests apart from his professional work, and he was always willing to give of his best to whatever he took up. His work as Secretary to the Society was of great value, and he contributed several papers to the *Proceedings*, among others one on "The Early Use of Aqua Vitæ in Scotland." His cheery presence and sound judgment will long be missed, and the sympathetic and touching reference to his death by the Chairman (Dr Macdonald) at the February meeting fittingly expresses the feelings of all who enjoyed the privilege of his friendship.

James Henry Cunningham, who for over thirty years was a Fellow of the Society, acted from 1891 to 1899 as Treasurer, and from that year until 1902 as Secretary. His special training as a civil engineer enabled him to render most important service to the Society in the conduct and planning of the excavation of the well-known Roman fort at Ardoch. The work was of peculiar difficulty, and it was done with a skill and a thoroughness which earned the warm appreciation of all competent judges. For many years he attended the Society's meetings with great regularity and took an active interest in its affairs. He was a man of sterling character, and his native kindness, blended with a quiet sense of humour, brought him many friends.

William Rae Macdonald, the Albany Herald, was elected to the Society in 1890, and was a Member of Council from 1899 to 1902. In all matters pertaining to Scottish heraldry and armorial seals he was recognised as an authority, and, as a result of his research, he contributed to the *Proceedings* articles dealing with the heraldry at Elgin Cathedral and

with heraldry in churchyards between Tain and Inverness. In 1904 he published his chief work, *Scottish Armorial Seals*, which placed him in the forefront of sigillographers. Only failing health prevented the publication of a much larger work on the same subject, which it is hoped may still be produced. He, too, for many years rarely missed a meeting, and his presence was always welcome.

John Fleming, who joined the Society in 1908, devoted the leisure of many years to photographing Scottish castles, and these photographs, contained in five albums, were presented by him to the Society and form a most valuable record.

Mungo Buchanan was elected a Corresponding Member in 1900. Among local antiquaries there can be few who take or have taken such a keen interest in the antiquities of their neighbourhood as he did. Long a resident in Falkirk, the Roman remains on the line of the Antonine Wall had for him a particular attraction. No expert excavation, no casual discovery, escaped his attention. He was an admirable draughtsman, and he could plot a site with singular accuracy. Besides preparing plans of the excavation of the Roman forts at Camelon, Castle Cary, and Rough Castle, he contributed numerous papers to the *Proceedings*.

Proceedings.—An advance copy of the new volume of the *Proceedings* lies upon the table. It contains twenty-two papers treating of a large variety of subjects, of which half may be classified as prehistoric, while the remainder deal with matters of historical and philological interest.

In his paper on stone circles at Raedykes, near Stonehaven, Mr James Ritchie has drawn attention to a group of monuments quite different in character from any hitherto described to the Society. Dr G. S. Graham Smith has submitted some new suggestions on the method in which the so-called "otter" or beaver traps were used. In describing his excavations of a long cairn, a Bronze Age cairn, and a hut-circle in the Stewartry of Kirkcudbright, Mr A. J. H. Edwards, Assistant Keeper of the Museum, has been able to record important and novel structural features in each of these constructions. Mr Ludovic Mann has furnished a report on a series of archæological discoveries made by him in Wigtownshire, by which several unique prehistoric relics have been brought to light, and he has also given a note on three Bronze Age gold ornaments from Arran and Wigtownshire, with suggestions regarding the way in which they were worn. In an exhaustive paper on Scottish Bronze Age hoards, Mr Callander, Director of the Museum, has tabulated all such discoveries of which he could find records, and has thrown fresh light on the chronology of the Bronze Age in Scotland. He has also given an account

of a small cemetery of the same period discovered near Dunfermline, as well as of the relics found in a series of graves unearthed at Camelon which were reported upon by Mr Mungo Buchanan. The results of the excavations carried out on Traprain Law during the summer of 1922, again under the supervision of Mr James E. Cree, were described by him. The Chalmers-Jervise Prize Essay on the Deuchny Hill Fort, by Mr R. R. Boog Watson, has been printed in the volume. Dr George Macdonald has discussed an inscribed Roman altar dedicated by the First Loyal Cohort of Vardulli about A.D. 180 and lately discovered at Jedburgh Abbey, and, in the same paper, he includes a description of two Roman sculptures from Croy recently presented to the Museum. In a second paper Dr Macdonald deals with the hoard of early fourteenth-century coins found at Auchenbart, Ayrshire—a remarkable hoard, in that it consisted almost entirely of foreign sterlings. Principal Laurie, in his paper on the pigments used in painting the Rosslyn Missal and the Celtic Psalter, introduces a fresh subject to our notice, and shows that the traditional palette of the early Byzantine manuscripts survived amongst the Irish monks when its use had been abandoned in England. Three important Scottish castles figure in the volume. The Royal Castle of Kindrochit in Mar, once an important fortress commanding the routes converging in the Cluny valley, is treated of by Mr W. Douglas Simpson; Messrs Angus Graham and R. G. Collingwood deal with Skipness Castle in Kintyre; and Mr G. P. H. Watson has written an account of the development of Caerlaverock Castle in Dumfriesshire. A well-known Scottish amulet, the Lee Penny, forms the subject of a paper by Mr Thomas Reid. Two cross-slabs from Wigtownshire, hitherto unnoted, are recorded by the Rev. R. S. G. Anderson. Mr Andrew Sharp contributes notes on Stuart jewellery, and Mr F. T. MacLeod on a pair of seventeenth-century Communion cups of silver in the parish church of Duirinish, Skye. Orkney place-names, a subject hitherto neglected, are dealt with by Mr Hugh Marwick, and Norse heraldry in Orkney by Mr J. Storer Clouston.

The Museum.—The Council are glad to be able to state that the historic and prehistoric galleries in the Museum were reopened to the public on Wednesday, 10th January. In the unavoidable absence, through indisposition, of the Right Hon. The Earl of Balfour, K.G., who had kindly consented to perform the opening ceremony, this duty was undertaken by Sir John R. Findlay, K.B.E., Chairman of the Board of Trustees, and Mr James Curle representing the Society.

On the 14th July the Museum was honoured by a visit from Their Majesties the King and Queen, who were received and conducted over

the Museum by Mr Callander, the Director, and Mr James Curle, on behalf of the Society. Their Majesties, who spent fully half an hour in examining the outstanding exhibits, expressed much interest in the collections, and the Queen was graciously pleased to accept a copy of Mr A. O. Curle's book, *The Treasure of Traprain*.

Numerous additions continue to be made to the collections, 681 objects having been received by donation and 112 by purchase.

Amongst the most notable acquisitions are the Penicuik Collection of Relics of Mary, Queen of Scots, which were secured for the nation by public subscription, chiefly through the efforts of Dr Walter Seton and Sir Bruce Seton of Abercorn; the group of relics belonging to the Bronze Age and Romano-British period, found near Camelon Station, presented by the North British Railway Company; a number of sculptured stones from Islay, presented by Captain Iain Ramsay of Kildalton; a collection of objects of stone, bone, and deer-horn from a kitchen midden adjoining an earth-house at Galson, Lewis, by Mr Norman Mackay; a collection of arrow-heads and other implements of flint and chert from Caithness, by Mr David Murray; a large quantity of pottery discovered at Coldingham, presented by the late Mr C. S. Romanes; a sculptured slab from the Broch of Burness, Orkney, presented by the Stewart Endowment Trustees; a collection of objects, including a stone mould for pilgrims' badges, and a fine bronze hand-pin, found in East Lothian, presented by Mr James S. Richardson; the brass matrix of one of the seals of the Abbey of Inchaffray, and a seal of Alexander, Duke of Albany, presented by Mr John Ferguson; a pewter Communion cup of the Associate Congregation in the East of Fife, 1743, presented by Mr John M'Pherson; a silver hash spoon with the Edinburgh hall-mark of 1746-7, presented by Mr William Brook; and a beaker urn, presented by Mr Lawrence Tweedie-Stodart of Oliver.

The Society have again to acknowledge their most grateful thanks to the Earl of Balfour for so kindly permitting the continuation of the excavations on Traprain Law and for presenting the relics found to the Museum.

Through the King's and Lord Treasurer's Remembrancer there were acquired four early thirteenth-century spoons, two fillets of gold, and a finger-ring of gold, found at Iona, and forty-five sterling's struck in Flanders, and the earthenware jug containing the hoard, found at Auchenbart, Ayrshire.

Excavations.—The examination of the fort on Traprain Law was continued during the summer. Owing to lack of funds, the season had to be very much curtailed. Operations were continued at the northern

end of the plateau, to the excavation of which our energies have been chiefly directed during the seven years we have been at work on the hill. Practically the whole of this shelf—amounting to about $3\frac{1}{2}$ acres in extent—has been searched. Owing to the shortness of our working season and the smaller extent of ground examined, the relics found are not so numerous as in previous years. Still, a considerable harvest has been secured, although only three and a half months' work was done. Again we have to acknowledge our indebtedness to Mr Cree for supervising the work.

The Society have contributed to the excavation of a kitchen midden in a cave on Eilean na Cloich, Lismore, by Mr J. Hewat Craw and Dr James Ritchie of the Royal Scottish Museum, and also to that of an earth-house at Yardhouses, Carnwath, by Mr Archibald Fairbairn.

The Gunning Fellowship.—The Gunning Fellowship for 1923 was awarded to Mr A. J. H. Edwards, Assistant Keeper of the Museum, to enable him to excavate an earth-house at Galson, Lewis. In spite of most inclement weather, a group of underground chambers was opened up.

The Library.—The additions to the Library amount to 50 by donation and 8 by purchase. Besides these, a considerable number of publications of learned societies, etc., have been received by way of exchange and by subscription. To the collection of manuscripts there have been 2 donations.

The Rhind Lectureship.—The Rhind Lecturer for 1922, Mr C. R. Peers, F.S.A., delivered a course of lectures on "Monastic Building in Britain" in January last. Dr H. R. Hall, British Museum, the lecturer for 1923, delivered his course of lectures on "The Civilisation of Greece in the Bronze Age" in the month of October. The lecturer for 1924 is Professor Thomas H. Bryce, Vice-President, his subject being "The Early Races of Scotland."

Chalmers-Jervise Prize.—The Stewartry of Kirkcudbright was chosen for the Chalmers-Jervise Prize Essay, but, although the competition was widely advertised, it is regrettable that no essays were received.

CARMICHAEL,
President.

The Treasurer read the annual statement of the Society's Funds, which was ordered to be printed and circulated among the members. A hearty vote of thanks was accorded to Mr J. Bolam Johnson for his gratuitous services as Treasurer.

MONDAY, 10th December 1923.

PROFESSOR THOMAS H. BRYCE, M.D., F.R.S.,
Vice-President, in the Chair.

A Ballot having been taken, there was elected as a Corresponding Member, on recommendation by the Council :—

GEORGE F. BLACK, D.Ph., New York Public Library, New York City, U.S.A.

The following were elected Fellows :—

JAMES BONNAR, Glendura, Cupar, Fife.

RICHMOND INGLIS COCHRANE, 26 Abercromby Place.

HEATLEY DICKSON, C.E., F.R.P.S., 6 Eglinton Crescent.

JOHN TAYLOR GIBB, High Street, Mauchline, Ayrshire.

REV. ALBERT JORDAN, M.A., D.D., LL.D., The Rectory, Llanbadarn-fawr, Penybont, Radnorshire.

REV. JOHN BERNARD M'GOVERN, St Stephen's Rectory, Chorlton-on-Medlock, Manchester, S.E.

LADY MACROBERT, B.Sc., F.G.S., Douneside, Tarland, Aberdeenshire.

J. W. E. STEEDMAN, S.S.C., Braighleacainn, Oban.

There were exhibited by Major Neil Fraser-Tytler of Aldourie a Belt-plate and a Dress-fastener of enamelled bronze, which were found in digging a drain at Drumashie, Dores, Inverness-shire, in 1846.

The belt-plate (fig. 1), which measures $3\frac{5}{8}$ inches in length and $1\frac{3}{4}$ inch in breadth, is of oval form, convex above and concave below, and has been covered with a coating of tin on the back as well as on the front. In the centre of the ornament is a flat rectangular panel with a milled border at the top and bottom. The panel shows two pointed oval and four trumpet-shaped cloisons which have been filled with enamel, and which, placed radially, alternate with the same number of plain flat spaces. In one cloison there is a piece of bright red enamel, and in some of the others there are the remains of what seems to have been yellow enamel. At the ends are double trumpet-like designs, the mouths, which are closed with hemispherical caps, facing inwards, all in high relief, encircling a perforation which is surrounded by a concave moulding. On the back are two low rectangular loops for attachment.

The dress-fastener (fig. 2), which is $1\frac{9}{16}$ inch in length, has a square head and a triangular loop. Like the belt-plate, it has been entirely coated with tin. The head has been decorated with nine enamelled squares, bordered and separated from each other by narrow plain bands. Four of the cloisons still retain their filling of yellow enamel, but in the

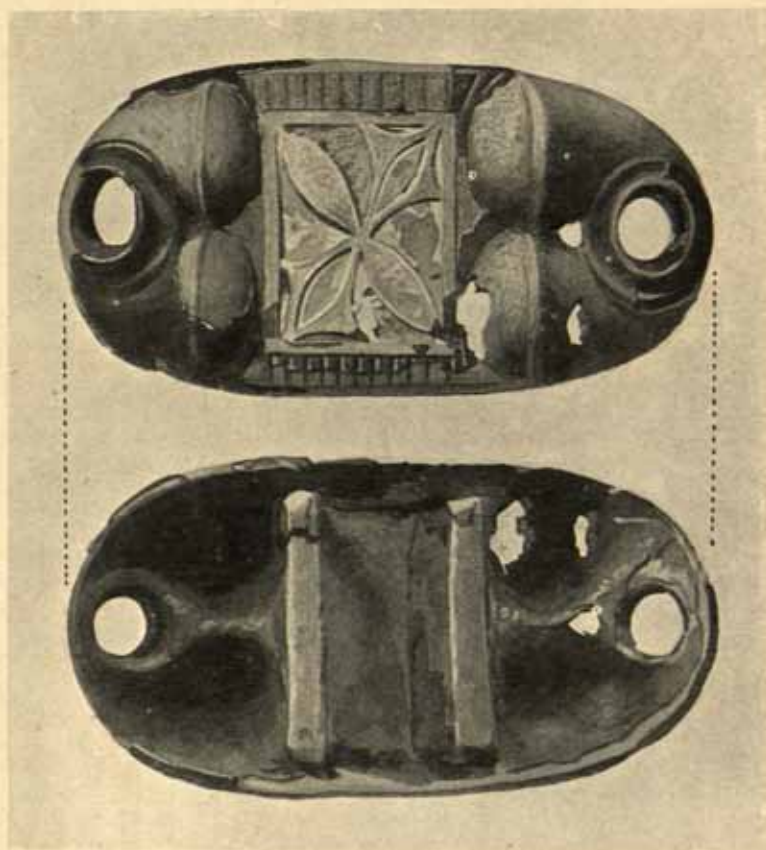


Fig. 1. Enamelled Bronze Belt-plate from Drumashie, Inverness-shire. (†.)



Fig. 2. Enamelled Bronze Dress-fastener from Drumashie. (†.)

remaining five there are only faint traces of this material, and its colour cannot be determined.

Both objects, which are cast, are beautiful examples of the work turned out by the bronze workers and enamellers of this country during the Early Iron Age. The perforations in the belt-plate are reminiscent of the larger perforations which contained an enamelled plate, seen in the massive bronze armlets that have been found only in Scotland.

The following Donations to the Museum, received during the recess 14th May to 30th November 1923, were intimated, and thanks voted to the Donors:—

(1) By Mrs DARROCH, 21 Gardner's Crescent.

Scotch Pebble Silver Brooch with looped border, $2\frac{3}{8}$ inches by $1\frac{1}{4}$ inch, mounted with an oval dyed agate of black and white colour.

(2) By WILLIAM BROOK, F.S.A.Scot.

Silver Hash Spoon with ridged stem and double drop termination at the back of the bowl, bearing the initials I K on the back of the handle. Assay Office, Edinburgh. Maker's mark, G E D (Dougal Ged). Assay Master's mark, H. G. (Hugh Gordon). Date, 1746-7. It measures $15\frac{1}{2}$ inches in length, and weighs 7 oz. 17 dwt. 19 grs.

(3) By LAWRENCE TWEEDIE-STODART of Oliver.

Beaker (fig.3) of buff-coloured ware wanting part of the rim, and measuring $6\frac{1}{2}$ inches in height, $5\frac{1}{8}$ inches in external diameter at the mouth, $4\frac{1}{2}$ inches at the neck, $5\frac{1}{4}$ inches at the bulge, and $3\frac{1}{4}$ inches at the base, the wall being $\frac{3}{8}$ inch thick. It has a long everted lip, ornamented with bands of vertical and crossed lines, and a large lozenge pattern, and the lower part is decorated with a similar lozenge pattern and a row of hanging triangles; on the top of the rim are crossed lines.



Fig. 3. Beaker from Oliver, Tweedsmuir.

The whole of the designs are impressed with a toothed stamp. The urn was found in a cist at Oliver, Tweedsmuir, Peeblesshire.

(4) By JAMES S. RICHARDSON, F.S.A.Scot.

Hand-pin of Bronze, $2\frac{1}{2}$ inches long, with open ring head showing three pellets on the lower side, the remainder of the ring being transversely corrugated; found in a rock shelter at Rhodes Links, North Berwick. (See *Proceedings*, vol. xli. p. 429.)

Naphtha Lamp, $12\frac{1}{2}$ inches high, of tinned iron, and Hanging Lamp of tinned iron, with cylindrical reservoir and spout on side contained in an under shell after the fashion of a crusie.

Collection of objects found in a kitchen-midden at the base of the south side of North Berwick Law:—

Slug-shaped Knife of brownish-yellow flint, $2\frac{1}{2}$ inches long, $\frac{1}{2}$ inch broad, dressed along both edges on one side; Scraper of light-grey flint, $\frac{3}{4}$ inch across; half of Hammer-stone, abraded at one end, present length $1\frac{3}{4}$ inch, breadth $2\frac{1}{2}$ inches; Hammer-stone of brown sandstone, slightly imperfect, 3 inches in greatest diameter; two Sling-stones, $1\frac{9}{16}$ inch and $1\frac{5}{16}$ inch in diameter; Handle of Deer Horn, $5\frac{1}{2}$ inches long, with a narrow bore through its entire length and a V-shaped socket at the broad end, both sides pitted by blows of a pointed implement; two Picks of Deer Horn, both imperfect, $9\frac{1}{4}$ inches and $12\frac{1}{2}$ inches in length, the former pitted on both sides; Deer-horn Tine, $7\frac{1}{4}$ inches long, smoothed and broken at the point; three fragments of Antlers, showing working; part of Leg Bone of Ox or Deer, 8 inches long, showing pittings; part of Rib Bone of Ox, $6\frac{3}{8}$ inches long, showing cuts; fragments of coarse hand-made Pottery; Splinter of Quartzite Hammer-stone, possibly reworked. (See *Proceedings*, vol. xli. p. 424.)

(5) By Rev. D. G. BARRON, D.D., F.S.A.Scot.

Fragment of an oblong Object of Slate with the face flat and the back scaled off, possibly a mould, measuring $5\frac{1}{2}$ inches by $1\frac{1}{8}$ inch at the widest part; on the face are six parallel grooves or matrices, and part of the gate for pouring in the metal at one end; from Bourtie, Aberdeenshire.

Sandstone Cup (fig. 4), $2\frac{1}{8}$ inches in height, $1\frac{3}{8}$ inch across the mouth, in the form of a miniature font; the bowl is of semi-globular shape with a vertical lip, the upper part being decorated with an arcading of pointed arches and the lower by a broad cable moulding; the lower part of the plinth, which is octagonal, having sunk rectangular panels

on the sides, and the upper part, connecting it with the bowl, decorated with lozenge patterns; found near Glamis, Forfarshire.

Stone Whorl, $1\frac{1}{8}$ inch in diameter, decorated on both sides with interlaced ornamentation; found at North Gallatown, Dunnottar, Kincardineshire.

Stone Object of rectangular form, of indeterminate use, 6 inches by $3\frac{1}{8}$ inches by $1\frac{1}{8}$ inch; on one face is an incised Latin cross having the square part in the centre further sunk and triangular incisions between the arms; on the other face is a broad chiselled groove and a very narrow one, and on the edge a socket-like hollow; from Stonehaven, Kincardineshire.

(6) By the late CHARLES S. ROMANES, F.S.A.Scot.

Objects found during the excavations at Coldingham Priory in 1922:—

Fragments of two oblong Stone Objects, probably moulds, similar in character to the example from Bourtie described above. They are

flat on the front and back and have parallel sides, the back being chamfered at the edges. The first, which measures $6\frac{1}{8}$ inches by $2\frac{3}{4}$ inches by $\frac{1}{8}$ inch, shows the lower end portions of six parallel grooves or matrices on the front, and the second, which measures $5\frac{3}{4}$ inches by $2\frac{1}{8}$ inches by $\frac{1}{8}$ inch, also has six grooves on the face, but they are cut off at both ends and only show the central part of the mould; point of a Tine of Deer Horn, $3\frac{1}{8}$ inches long, dressed all over the surface and bluntly pointed, with a perforation at the broad end; Playing Marble of marled brown and yellow stone, $\frac{5}{8}$ inch in diameter; Skillet (restored) of buff-coloured pottery, with yellow-green glaze inside, the handle folded under in a loop, diameter of bowl $5\frac{5}{8}$ inches, depth $1\frac{1}{8}$ inch, handle $2\frac{1}{2}$ inches long; large fragment of Basin (less than half) of buff-coloured ware, inside green glazed, external diameter of mouth $14\frac{1}{4}$ inches, depth 6 inches; half of Flat Bowl of thin hard grey ware,

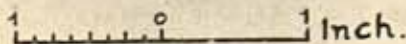


Fig. 4. Stone Cup from Bourtie.

with a narrow pedestal foot, 2 inches in diameter, and a projecting flange three-quarters of an inch below the lip which is slightly inverted, height $2\frac{9}{16}$ inches, external diameter of mouth $5\frac{1}{2}$ inches; greater part of a two-handled Globular Jar of black ware, green glazed outside, red inside, with constricted neck, everted lip, and remains of a spout, $5\frac{3}{4}$ inches high, external diameter of mouth $3\frac{1}{8}$ inches, at the bulge $6\frac{1}{8}$ inches, and at the base $3\frac{3}{8}$ inches; small Pitcher, restored, of red ware, with yellow glaze running into green on exterior, $7\frac{1}{4}$ inches in height, $2\frac{3}{4}$ inches in diameter at mouth; half of a small Pitcher, restored, of red ware with thin greenish glaze on exterior, $5\frac{1}{2}$ inches in height, 2 inches in diameter at mouth; also a great quantity of other fragments of Pottery.

(7) By Miss J. C. C. MACDONALD, Ballintuim, Blairgowrie.

Large Horn Spoon, $19\frac{1}{4}$ inches long, the handle decorated with incised interlaced designs and hatched triangles, HF in monogram on the front, R.C. 1721 on the back.

Tinned iron Shot Flask with a spring lid at each end, for two charges of buck-shot, $3\frac{3}{8}$ inches in length.

(8) By GEORGE MALCOLM, 8 Victoria Terrace, through WILLIAM KIRKNESS, F.S.A.Scot.

Padlock of Brass, inscribed "CRIGHTON FECIT GLASGOW."

(9) By Miss PREACHER, 1 West Claremont Street.

Three Wooden Objects used in making straw hats, consisting of a Mangle with two rollers, a cylindrical Block, $9\frac{1}{4}$ inches long, 5 inches and $4\frac{7}{16}$ inches in diameter at either end, and a square-handled Object with thin semicircular blade of wood kept in position by two pins.

Two specimens of Plaited Straw.

(10) By Miss JANE B. LEES, Moniaive, Dumfriesshire.

Special Constable's Baton, of wood, 27 inches long, painted brown with grey ends, bearing, in gold and colours, W R IV, beneath a crown, and COUNTY OF EDIN. N 5, below, served out to James Lees, Farmer near Gorebridge, grandfather of the donor.

(11) By DAVID SMITH, 39 Princes Street, Perth.

Dutch-hoe of iron, made by a smith, $11\frac{1}{2}$ inches broad, dug up in a garden at Barnhill, Perth.

(12) By JAMES S. DONALD, F.S.A.Scot.

Communion Tokens—Hilltown Free Church, Dundee, and Colinsburgh Relief Church, 1801.

(13) By Sir JOHN SINCLAIR, Bart., of Barrock.

Stone Axe, $10\frac{1}{2}$ inches in length and $3\frac{1}{2}$ inches in breadth, from Barrock Mains, Lyth, Bower; and Rib of Whale, shaped like a club, from the tomb of one of the Earls of Caithness, St Fergus Church, Wick.

(14) By JAMES M. GOUDIE, Corresponding Member.

Small conical Stone Object, probably a chess-man, $1\frac{2}{3}$ inch in height and $\frac{3}{4}$ inch in diameter at the base, with a face carved at the top on one side (fig. 5); from the Broch of Main, Cunningsburgh, Shetland.

(15) By JAMES M'PHERSON, F.S.A.Scot.

Brass Belt-plate of the Royal St Andrew Volunteers.

(16) By Public Subscription raised by WALTER SETON, D.Lit., F.S.A., and Sir BRUCE SETON, Bart., of Abercorn, F.S.A.Scot.

The Penicuik Jewels of Mary, Queen of Scots, consisting of a Gold Locket, $1\frac{1}{4}$ inch in height and $1\frac{1}{8}$ inch in width, enamelled in black and set with seed pearls, in the centre of the front a tiny miniature of the Queen, and in the centre of the back a similar miniature of James VI. as a boy; a Gold Pendant decorated with black and white enamel and set with pearls; a Gold Necklace, $14\frac{1}{2}$ inches in length, consisting of fourteen large oval beads of filigree work with thirteen small circular gold beads between, a large oval pendant gold bead of filigree work in the centre; and a Fan of silk and silver tissue of brocaded conventional floral designs in red, blue, yellow, and green, which folds up into a tortoise-shell handle terminating in an imperfect ivory knob; also a Ryal of Mary and Henry, 1565; one or two threads of Prince Charles's hair; a leather-covered Casket; a small pair of Scissors in silver filigree case; and a Reticule and Handkerchief. (See *The Penicuik Jewels of Mary, Queen of Scots*, by Dr Walter Seton.)



Fig. 5. Carved Stone Object from Broch of Main, Shetland. (†.)

(17) By CHARLES E. WHITELAW, F.S.A.Scot.

Wooden Crimping Frame from Aberdeen.

(18) By JOHN MORRISON, Galson, Lewis.

Communion Token, Stornoway, 1840.

(19) By WILLIAM KIRKNESS, F.S.A.Scot.

Cross-slab found in the graveyard of St Boniface Church, Papa Westray, Orkney. (See *Proceedings*, vol. lv. p. 134.)

(20) By Miss LUCINE EDMONSTONE, Portobello.

Edinburgh High Constable's Badge of satin and velvet with a star and thistle of white metal in the centre, worn, on the occasion of the visit of Queen Victoria in 1842, by Francis Edmonstone, Engraver, grandfather of the donor.

(21) By the TRUSTEES OF THE STEWART ENDOWMENT, through DUNCAN J. ROBERTSON, Factor, Kirkwall.

Sculptured Slab, measuring 3 feet 4 inches in length and 8 inches in breadth, bearing the incised figure in profile of a man clothed in a garment like a cope, the lower edge of which is decorated with a zigzag line, and wearing a head-gear like a coronet with three pellets, the height of the man being only $2\frac{1}{2}$ inches; there are also many other indeterminate incised markings on the slab; from the Broch of Burness, Firth, Orkney.

(22) By ROBERT LAUDER, 1 Scott Street, Glasgow.

Stone Mould for buttons, Luckenbooth brooches and pins, imperfect at one end, measuring $3\frac{1}{2}$ inches by $2\frac{3}{16}$ inches by $\frac{1}{16}$ inch, found in Fife.

(23) By MURDO MORRISON, J.P., Corresponding Member.

Barbed Arrow-head of chert, 1 inch in length, found on the machar land near the Parish Church of Barvas, Isle of Lewis.

Long-handled Weaving Comb of cetacean bone, $5\frac{1}{16}$ inches long, found in a kitchen-midden at Bragar, Lewis.

(24) By DAVID MURRAY, Links Farm, Castletown, Caithness.

Three Barbed and forty-two Leaf-shaped Arrow-heads, thirty-seven Implements, and two Cores of flint and chert, from Stemster Hill and Knockdee, parish of Bower, and from Hill of Swordale, parish of Halkirk, Caithness.

Stone-axe from Melvich, Sutherland; two Hammer-stones, three Stone Discs, cylindrical Stone Object, Stone Mould for buttons and brooches, from Caithness; nineteen Stone Whorls from Knockdee and Stemster.

Twelve Communion Tokens—Bower, Halkirk, Olig, Reay, Watten, Wick, and Latheron.

(25) By Miss ALICE RADCLIFFE, 21 Berkeley Square, London.
 Beggar's Badge, Comrie parish, 1757.

(26) By JAMES MACKENZIE, J.P., F.S.A.Scot.

Æolian Harp, 32 inches in length and $4\frac{3}{8}$ inches in breadth, with twelve strings, long in use in the Manse of the Rev. Alexander Leslie, Minister of the Secession Church, Milnathort.

Seven home-made Playing-cards, fashioned out of seventeenth-century documents, found in a small pocket in the boards of an old book.

(27) By Miss GRIESSEMAN, Willowglen, Stornoway.

Silver Penny of Eadgar (A.D. 959-975), found at an earth-house at Galson, Borge, Lewis. (See subsequent communication by A. J. H. Edwards, F.S.A.Scot.)

(28) By W. L. FERGUSON, 45 Ann Street.

Stone Axe, $5\frac{3}{4}$ inches long, $2\frac{3}{8}$ inches broad at cutting end, from Fyvie, Aberdeenshire, originally in Sturrock Collection.

Socketed Bronze Axe, from Newhaven, Sussex.

Two small wall fragments of a Beaker, probably from Grueldykes, Duns.

(29) By H.M. OFFICE OF WORKS.

Small Head of a Man carved in sandstone, found at the east end of Culross Abbey, Fife.

(30) By Dr WILLIAM BANNERMAN, F.S.A.Scot.

Communion Token, Gamrie, 1734.

It was announced that the following objects had been purchased for the Museum:—

Collection of forty-two Communion Tokens.

Bronze Spear-head (fig. 6), $17\frac{1}{4}$ inches long, found in Bowsden Moor, Duddo Castle, Northumberland, about 1882. (See *Proceedings*, vol. xvii. p. 93.)

Beggar's Badge of Montrose, inscribed NO 25/ MON-TROSE/ BEGGING POOR and E/ 1776.

Food-vessel of dark-brown pottery (fig. 7), $4\frac{1}{2}$ inches in height, $5\frac{1}{16}$ inches in external diameter at the mouth, $6\frac{1}{8}$ inches at the widest part, and $3\frac{1}{2}$ inches across the base, the wall encircled by two cordons and decorated by alternate bands of impressions made by a triangular and a toothed stamp, and the rim,

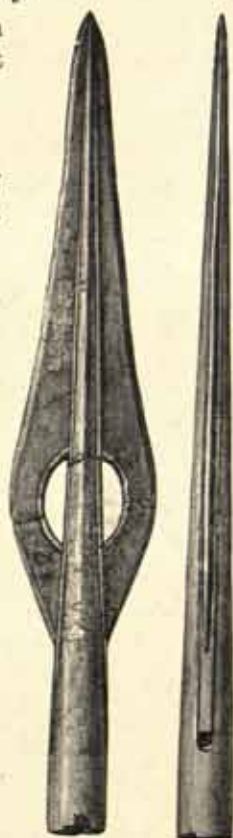


Fig. 6. Bronze Spear-head from Bowsden Moor.

which is bevelled downwards towards the inside, also decorated with impressions of the triangular stamp; from Argyll.

Three old Curling Stones, from Melville Castle, Lasswade.

Flat Copper Axe, $6\frac{1}{8}$ inches long and $3\frac{3}{8}$ inches in breadth, found



Fig. 7. Food-vessel from Argyll.

4 feet below the surface of the road, near the cross-roads north of St Andrews, Lhanbryde, Morayshire, in digging a trench for the pipes of the Lossiemouth water supply in 1905.

Brass Sun-dial, dated 1634, from Aberdeenshire.

ACQUIRED THROUGH THE KING'S AND LORD TREASURER'S REMEMBRANCE.

Four Silver Spoons, a Fillet of Gold, and a small portion of the linen fabric in which the spoons were wrapped, found in the church at the Nunnery, Iona; and part of a second Fillet, a Finger-ring, and a small piece of Wire, all of gold, found in St Ronan's Chapel, the Nunnery, Iona. (See subsequent communication by A. O. Curle, F.S.A.Scot.)

Donations of Books, etc., to the Library:—

(1) By HIS MAJESTY'S GOVERNMENT.

Calendar of the Close Rolls. Richard II. Vol. iv. 1389-92.

Curia Regis Rolls of the Reigns of Richard I. and John. Vol. i.

Calendar of State Papers. Colonial Series. America and West Indies. June 1708-9.

Calendar of State Papers. Venetian. 1636-9.

Calendar of the Fine Rolls. Vol. vii. Edward III. 1356-68.

(2) By Rev. WILLIAM A. GILLIES, B.D., Minister of Kenmore.

A Map of the Duke of Argyle's Heritable Dukedom and Lands, 1734.

(3) By W. DOUGLAS SIMPSON, M.A., F.S.A.Scot.

Proceedings of the Anatomical and Anthropological Society, University of Aberdeen, 1904-6.

(4) By O. G. S. CRAWFORD, B.A., Tan House, Donnington, Newbury.

Papers and Proceedings of the Hampshire Field Club and Archaeological Society. Vol. ix. Part 2.

(5) By Mrs BEVERIDGE, St Leonard's Hill, Dunfermline.

The "Abers" and "Invers" of Scotland. By Erskine Beveridge, LL.D.

(6) By FRANCIS DE ZULUETA, the Author.

Embroideries by Mary Stuart and Elizabeth Talbot at Oxburgh Hall, Norfolk.

(7) By THE TRUSTEES OF THE BRITISH MUSEUM.

Coins of the Roman Empire in the British Museum. Vol. i. Augustus to Vitellius. By Harold Mattingly, M.A. London, 1923.

(8) By ROBERT MURRIE, 43 Morningside Park.

The Romans in Cleveland. By Frank Elgee. York, 1923.

(9) By THE LIBRARY ASSOCIATION.

The Subject Index to Periodicals, 1920. G. Fine Arts and Archaeology. London, 1923.

(10) By HUGH MARWICK, F.S.A.Scot.

Proceedings of the Orkney Antiquarian Society. Vol. i. (Session 1922-3.)

(11) By T. SHEPPARD, M.Sc., F.G.S., F.S.A.Scot., the Author.

Hull Museum Publications:—

No. 133. Record of Additions.

No. 134. Saxon Gold Ring found at Driffield, East Yorks, etc.

No. 135. Roman Remains at Middleton-on-the-Wolds, etc.

(12) By H.M. STATIONERY OFFICE.

Record Office, Scotland. Indexes No. 6.

Index to Register of Deeds, 1667. Vol. vii. Edinburgh, 1923.

(13) By The Right Hon. Viscount COWDRAY and The Right Rev. Bishop BROWNE, D.D., Honorary Fellow.

Echt-Forbes Family Charters, 1345-1727. Records of the Forest of Birse Notarial Signs, 926-1786. By The Right Rev. G. F. Browne, D.D., etc.

(14) By THOMAS M'LAREN, F.S.A.Scot., the Author.

Perth in the Olden Times, Glimpses of Old-Time Trades in Perth: Address delivered to the Perth Rotary Club on 20th November 1919.

St John's Church, Perth. Address delivered to the Perth Rotary Club on 22nd January 1920.

(15) By Dr J. H. HOLWERDA, the Author.

Arentsburg een Romeinsch Militair Vlootstation. Leiden, 1923.

(16) By J. L. M'GILLIVRAY WATSON, Chief, St Andrew's Scottish Society of Southland, at Invercargill, New Zealand.

Michael Scot (The Wizard) and his Time.

(17) By RENÉ GORDON, 29 Boulevard de Strasbourg, Bourges, France, the Author.

Les Ecossais en Berry.

(18) By LÉON COUTIL, Honorary Fellow, the Author.

Eglise Mérovingienne ou Carolingienne de Notre-Dame de Rugles (Eure).

L'Age du Bronze en Normandie, Eure, Seine-Inférieure, Orne, Calvados et Manche.

L'Age du Bronze en Normandie.

Les Eglises Pré-Romanes de la Normandie.

(19) By KEITH S. M. SCOTT, M.B.E., B.Sc., F.S.A.Scot.

Memoirs of Scott of Thirlestane and other Families of the Name of Scott. By John Scott of Rodono, Esq. (Typewritten Copy.)

(20) By SYMINGTON GRIEVE, F.S.A.Scot., the Author.

The Book of Colonsay and Oronsay. 2 vols.

(21) By PHILIP SULLEY, F.S.A.Scot., the Author.

The Journeymen Dyers' Incorporation of Galashiels.

(22) By ROBERT FINLAYSON, Town Clerk of Arbroath, the Author.

Royal Burgh of Arbroath: Some Old Local Documents.

The purchase of the following books for the Library was intimated:—

Report of the Research Committee of the Woolhope Club: Excavations on the Site of the Romano-British Town of Magna, Kenchester, Herefordshire, during the years 1912-3, and Supplemental Report. By G. H. Jack, M.Inst.C.E., F.G.S., with Contributions by A. G. K. Hayter, M.A., F.S.A.

Die Aeltere Eisenzeit Gotlands. Heft 2.

Corpus Inscriptionum Latinarum. Vol. i. Pars II. Fasc. 1.

Sussex Archaeological Collections. Vols. xxvi., xxx., xxxi., and xxxiv.

The Penicuik Jewels of Mary, Queen of Scots. By Walter Seton of Abercorn, M.A., D.Lit., F.S.A. London, 1923.

The following Communications were read:—

I.

A LONG CAIRN NEAR GOURDON, KINCARDINESHIRE, AND A BRONZE AGE CAIRN CONTAINING A SHORT CIST AND AN URN AT IDVIES, FORFARSHIRE. By J. GRAHAM CALLANDER, F.S.A.Scot., DIRECTOR OF THE NATIONAL MUSEUM OF ANTIQUITIES.

LONG CAIRN NEAR GOURDON.

The prehistoric burial cairns of Scotland, like the barrows of England, can be divided into two classes according to their general form—the long cairn and the round cairn—the first being assigned to the end of the Neolithic period, and the second to the Bronze Age, although some of the large round cairns belong to the earlier time. In the Scottish Neolithic cairns the burial chambers are of comparatively large size, showing a variety in their general shape and in the arrangements of the compartments into which they are often divided. In addition, they frequently have a low, narrow entrance passage leading into the tomb, so that a series of burials could be made in it. In the Bronze Age cairns there is no large chamber, but the bodies were placed either in a short slab-lined grave or in a cavity under or within the mass of the mound.

Long cairns are to be found in considerable numbers in the northern, western, and south-western parts of the country, but only one example—

the "Mutiny Stones" in a remote part of the Lammermoors, near the northern boundary of Berwickshire—has been recorded in the east of Scotland. It is remarkable that none seems to have been noted in the north-east, in Aberdeenshire and the adjoining counties which are so rich in the implements and weapons of the period. But it is quite probable that there have been examples, which have been cleared away during agricultural operations. Nevertheless, a thorough search of the north-east would probably result in the discovery of some of these monuments or of their remains.

Last summer, while on a visit to Kincardineshire, I was able to locate and survey a long cairn¹ on Gourdon or Bikmane Hill, about $\frac{1}{2}$ mile west of the village of Gourdon. The cairn is built on the terminal height of a short range of low hills which strike inland from the coast, its elevation being 440 feet above sea-level. Immediately to the east there is a very steep descent to the shore 600 yards away, to the north and west the view is interrupted by rising ground, but to the south-west a considerable stretch of the coast and adjoining country is in sight.

The cairn, whose main axis lies about north-east and south-west (65° east of north magnetic), consists of stones and earth, and for the greater part is overgrown with grass. Many rounded stones from the local conglomerate had been used in its construction, and, though few angular blocks are to be seen, it is more than probable that any such stones appearing on the surface had been removed for building, as the monument is much despoiled and there are hollow cavities along both sides of the mound. The ends are rounded, and there is no evidence that the cairn had been of the horned variety, which is seen at its best in the north of Scotland. No large stones which might indicate the presence of a burial chamber or of an entrance passage to one were observed. The length of the monument is 155 feet, its breadth near the northern end 40 feet, near the southern end 25 feet, and its general height, except towards the southern extremity where it is lower, about 9 feet.

BRONZE AGE CAIRN AT IDVIES.

In April of this year, while workmen were digging a cavity for a water cistern in the summit of a mound on the estate of Idvies, in the parish of Kirkden, Forfarshire, a short cist containing incinerated human bones and an urn was discovered. Through the kindness of Mr J. Sharp Callender-Brodie of Idvies, the proprietor of the ground, and Mr A. E. Hutchison, W.S., I was able to visit the site a few days later and obtain a fairly complete record of the discovery.

¹ I have been informed that the cairn used to be called the "War woof."

The site of the find is a circular mound marked "Mote" on the Ordnance Survey Map, but it is generally known in the district as the Law Hill or the Gallows Hill. It lies about 450 yards south of the mansion-house of Idvies, on the brow of a brae on an undulating hillside rising towards the south, at an elevation of 464 feet above sea-level, and commands a wide view of the country towards the west. On the east side the mound rises to a height of about 12 feet above the natural level of the ground, but on the opposite and lower side it is about 5 feet higher owing to the slope; its diameter is about 80 feet.

In excavating for the foundations of the cistern, a cavity some 12 feet square had been sunk in the mound to a depth of 6 feet, when the cover of the cist was encountered. The bottom of the excavation consisted of undisturbed sandy clay, which also extended 3 feet higher on the north, west, and east sides, there being 3 feet of small boulders and pieces of stone mixed with earth above the clay. On the south side was a large wedge-shaped mass of forced soil and stones extending down to the level of the cist. From these occurrences it appears as if a natural hillock had been selected for the interment, an excavation had then been made from the south side, where there may have been a natural hollow, and, after the burial, not only had the cavity and the side cutting been filled in with stones and earth, but a coating of the same materials, about 3 feet in thickness, had been added to the summit and sides of the mound.

Beyond the smashing of the cover, which was an irregularly shaped flag of sandstone about $1\frac{1}{2}$ inch thick, no damage had been done to the cist when I saw it. The little chamber was particularly well made, the sides and ends each consisting of a thin slab of sandstone set on edge. At the mouth, which was perfectly flat, it measured internally 2 feet 4 inches in length, 1 foot 8 inches in breadth at the east end, 1 foot 9 inches at the west end, and 1 foot 2 inches in depth, the main axis running about east-north-east and west-south-west (91° east of north magnetic). At the bottom it was about 2 inches more in length and breadth than at the mouth, as the stones on the north and west inclined slightly inwards at the top. The slab forming the west end measured about $3\frac{1}{2}$ inches in thickness, but the others only from $1\frac{1}{2}$ inch to 2 inches. The stone at the east end overlapped the side slabs by about 1 inch, while the slab on the south side overlapped that at the west end, and the latter that on the north side to the same extent.

There was very little soil in the cist, but in the south-west corner was an urn (fig. 1) standing in an upright position, while a deposit of incinerated human bones lay on the floor, none being in the urn. A few fragments of charred wood were found among the burnt bones.

When first exposed the urn was complete, but it was broken afterwards by the workmen. However, the greater part of the fragments were recovered by Mr Callender-Brodie, and it has been possible to make an almost complete restoration. From the illustration it will be seen that it is a vessel of very unusual character, both in form and ornamentation. The paste of which it is made is very coarse, and jet black in the interior, the outside being of reddish colour dotted with dark specks, showing a metallic glint like black-lead. The vessel is lop-



Fig. 1. Urn found at Idvies.

sided, being straighter on one side than on the other. It has a slightly everted lip, and practically no constriction at the neck, which is of the same diameter as the part lower down, where there is usually a bulge. The top of the brim forms an acute angle, as it bevelled sharply downwards on the inside. The urn measures $8\frac{1}{4}$ inches in height, $6\frac{7}{8}$ inches in external diameter at the mouth, $6\frac{1}{2}$ inches at the neck and body, and 4 inches across the base. The wall is $\frac{1}{2}$ inch thick, but thickens slightly just under the lip. From the base to the rim the wall is decorated with twenty-six horizontal rows of a rouletted or stamped design encircling the vessel. This design differs from the impressions formed by the narrow toothed

stamp which are so frequently met with on Bronze Age pottery, inasmuch as it is about $\frac{5}{16}$ inch broad. Each row of impressions is about this distance from those adjoining it on both sides. The outside of the brim and the bevelled inside are covered with similar impressions placed obliquely and close together.

In form the urn resembles the beaker more than any other class of Bronze Age pottery, but in the thickness of the wall and the texture of the clay it approximates more to the food-vessel. Further, it follows the food-vessel more than the beaker in having its exterior entirely covered with ornamentation. There are a few Scottish beakers decorated in this fashion, but in these cases it has been done by winding a twisted cord spirally round the vessel.

Though it can hardly be classified as a true beaker, the urn may be

placed in this category, but its association with cremated remains is very unusual.

With regard to the human remains found in the cist, Professor Thos. H. Bryce, F.S.A.Scot., who examined them, reports that "the deposit is an ordinary one, except that the incineration is not so complete as usual—some fragments are charred only, and some of the bones of vertebræ have hardly been reached by fire. The individual was an adult, as can be determined by certain of the hand bones which have been preserved whole. It is not possible to guess the sex. I think the deposit represents only one individual, as I could not detect any duplicate fragments, and the amount of debris is not more than can be accounted for by one skeleton. A small piece of bone bears a green stain, possibly caused by being in contact with a small object of bronze."

II.

SHORT STONE CIST FOUND IN THE PARISH OF KINNEFF AND CATTERLINE, KINCARDINESHIRE. BY PROFESSOR R. W. REID, M.D., F.R.C.S., REGIUS PROFESSOR OF ANATOMY, UNIVERSITY OF ABERDEEN, AND CAPTAIN THE REV. J. R. FRASER, F.S.A.Scot., F.R.S.E., F.G.S.E.

On 17th March 1923, Mr James Scott, residing at The Cottage, Upper Mains of Catterline, had occasion to be searching for sand for building purposes when he came upon a large stone 4 inches from the surface of a gravelly mound. Being aware that such a stone was not to be expected in this mound, with which he was familiar, he fortunately had the curiosity to make further excavation, and brought to view the short stone cist which is described in this paper.

The cist was situated in an eroded terrace of fluvio-glacial sand in a cultivated field belonging to the farm of Upper Mains of Catterline, 250 feet above sea-level, 130 yards west of the Stonehaven to Bervie road, close to the fifth milestone from Stonehaven, and midway between Stonehaven and Bervie.

The magnetic bearing of the main axis of the cist was N. 65° E. The magnetic variation for this part of Kincardineshire and for this year is 17° 30' W. The true bearing is therefore 47° 30' east of north.

The cist (fig. 1) was of an elongated form, quadrilateral in outline. The end slabs were vertical and parallel with one another. The side slabs converged towards the north-east end, and inclined towards one another to such an extent that the distance between them at the

floor level was 191 mm. ($7\frac{1}{2}$ inches) more than at the mouth of the cist. The inside measurements of the mouth of the cist were:—north-east end 730 mm. (2 feet $4\frac{1}{4}$ inches), south-west end 838 mm. (2 feet 9 inches), south-east side 1244 mm. (4 feet 1 inch), and north-west side 1193 mm. (3 feet 11 inches).* The depths of the north-east and south-west ends were 730 mm. (2 feet $4\frac{1}{4}$ inches) and 635 mm. (2 feet 1 inch) respectively, while the depth of each of the south-east and north-west sides was 749 mm. (2 feet $5\frac{1}{2}$ inches).

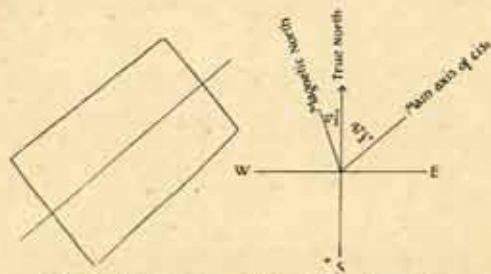


Fig. 1. Orientation of the Catterline Cist.

it was peculiar, when compared with the coverings of similar cists found in Aberdeenshire, in that, instead of its being formed of one layer of stones, it consisted of many such stones arranged in three layers (fig. 2). The uppermost was formed of two large flat stones lying about 102 mm.

The roof or covering was roughly 914 mm. (3 feet) thick, and

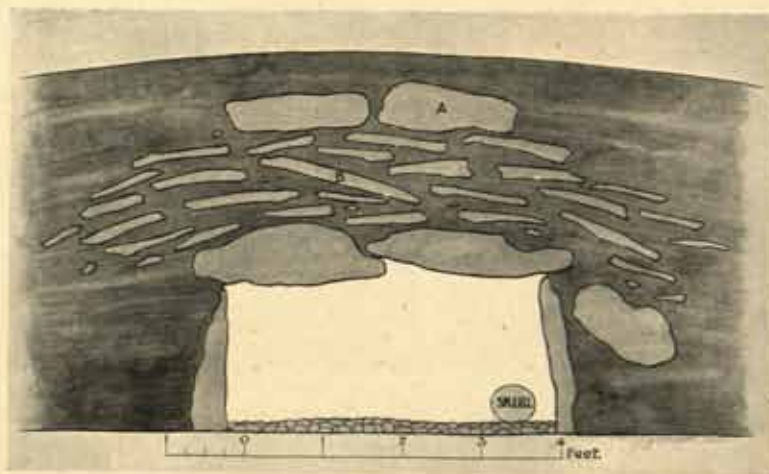


Fig. 2. Section of the Catterline Cist. A. Sculptured Stone. B. Perforated Stone.

(4 inches) below the surface of the ground. The upper surfaces of these stones bore scorings caused by plough and harrow irons, and were irregular and rough. The under surface of the one lying next the north-east end had been moulded and scratched by glacial action. This stone had all the appearance of being an erratic boulder, and bore on its under surface rude sculpturing (fig. 3). It seems likely that these sculptured

markings had been exposed to atmospheric weathering for a considerable period of time before the stone was utilised as a top covering for the cist.

Such figures are apparently rare on cist slabs, but a few other occurrences have been noted. In Anderson's *Scotland in Pagan Times*, pp. 87 ff., reference is made to these, and the circular figures on the cover of the Carnwath cist illustrated at p. 88 are similar in general appearance to those on this stone.

The second layer was about 16 inches thick, and was composed of about twenty flat stones embedded in sand. They were of irregular shape, varying in width from 152 mm. (6 inches) to 660 mm. (26 inches),



Fig. 3. Under surface of Cover Stone of Catterline Cist, showing sculpturing.

and about 51 mm. (2 inches) to 76 mm. (3 inches) thick. The largest of these, which measured 660 mm. (26 inches) by 508 mm. (20 inches), and in thickness varied from 38 mm. ($1\frac{1}{2}$ inch) to 83 mm. ($3\frac{1}{4}$ inches), contained an extremely interesting feature by way of an artificial perforation countersunk from both sides (fig. 4). The diameters of this aperture on the surfaces of the stone were 83 mm. ($3\frac{1}{4}$ inches) and 76 mm. (3 inches), and diminished to 32 mm. ($1\frac{1}{4}$ inch) at the point where the two countersinkings met. The stones of this layer showed no evidence of weathering.

The third layer, which was in immediate contact with the mouth of the cist and at a depth of 914 mm. (3 feet) from the surface of the ground, was formed by two large, flat, roughly surfaced stones which, as they met over the middle of the cist, gave evidence of being very coarsely rabbeted (fig. 2). The north-east covering stone measured

762 mm. (2 feet 6 inches) by 1029 mm. (3 feet 4½ inches), the other 800 mm. (2 feet 7½ inches) by 1219 mm. (4 feet), and their thicknesses varied from 76 mm. (3 inches) to 152 mm. (6 inches).



Fig. 4. Cover Stone of Catterline Cist with countersunk perforation.

All the stones which formed the sides and roof of the cist were of local origin, belonging to a belt of flaggy sandstones and conglomerates of Lower Old Red Sandstone Age which can be traced along the slopes of St John's Hill about 1 mile distant from the mound in which the cist was found. A certain amount of dressing was evident upon the edges of the stones which formed the lips of the cist, and also rude chamfering was seen on the north-west side slab at its junction with the end stones.

No special packing of any kind was visible between the adjacent edges of

the stones which formed the walls of the cist.

Outside the slab which formed the north-east end of the cist, a large boulder of conglomerate had been placed to help to keep the slab in position (fig. 2).

The total weight of the stones which composed the cist, including its coverings, was slightly over two tons.

The floor (fig. 5) consisted of the underlying glacial sand covered by a layer, about 76 mm. (3 inches) thick, of pebbles similar to those found at present on the sea-beach about 1 mile distant. Upon the floor lay a skeleton, an incomplete urn, and a small implement of quartzite embedded in a reticulated mass of roots of one of the higher plants (a Dicotyledon), which was coated with a white chalky-looking crystalline powder. A similar mineral substance was seen forming an incrustation over the lower portion of the north-west side slab.



Fig. 5. Catterline Cist with Skeleton and Urn *in situ*.

This fine white powdery substance was also to be observed on the crumbling edge of the urn. On chemical analysis it consisted of phosphate of lime. No charcoal was found, and careful sifting of the pebbles and sand on the floor failed to reveal the presence of any other artifacts.

The skeleton lay in a crouching position upon its left side, with its front facing the south-east and with its back parallel to the north-west wall of the cist, and its head lay near the north-east end.

The joints of the right upper and both lower extremities were flexed, so that the right hand lay near the front of the head.

The humerus of the left upper extremity was parallel with the trunk, the elbow and wrist being bent, with the hand situated near the middle of the left thigh bone.

The incomplete urn, with its mouth directed towards the south, rested upon a flat stone behind the neck of the skeleton, and a conical implement of quartzite was seen lying near the left hand.

The cist and its contents were presented to the University of Aberdeen by David Milne, Esq., Mains of Catterline, Kinneff and Catterline, and were removed to the Anthropological Museum of that University, where it has been reconstructed and its contents placed in position so that it may be seen by the general public.

Before the cist was reconstructed a careful examination of its contents was made in the Anatomy Department of the University, and the following is a record of the observations which were made:—

Skeleton—Skull (fig. 6).—The skull is that of a male. The greater part of its left side, which lay upon the floor of the cist, had crumbled away. Small fragments of the sphenoid, temporal, and superior maxilla were found on the floor of the cist under the skull. On the right side a triangular portion is missing in the squamo-mastoid region of the temporal and adjacent angle of the parietal. Fractures are seen in the right parietal and right frontal bones. These are post-mortem, and have increased in size in the process of drying of the skull after its removal from the cist. Only a small portion of the upper maxilla remains, and is attached to the malar bone. The ethmoid, lacrimal, palate, and vomer are missing. Only a small fragment of the right nasal is present, articulating with the frontal bone.

Externally the sutures of the vault are very delicate and intricate, the frontal and posterior two-thirds of the sagittal being completely closed. There is a circular Wormian bone, 11 mm. ($\frac{4}{10}$ inch) in diameter, near the right asterion. At the pterion the frontal is 14 mm. ($\frac{5}{8}$ inch) distant from the squamosal. Internally all the sutures of the vault are completely closed, and from this it may be inferred that the age of the skull at death was over forty years, assuming that the sutures of

the period in which the individual lived closed at the same age as those of the skulls of the present day.

All sites for muscular attachments are strongly marked.

The cranium has a capacity of 1600 c.c., and about 120 c.c. in excess of the average Scottish male skull of the present day.

Norma verticalis (fig. 7).—The external angular process of the frontal bone is markedly prominent, extending about 5 mm. ($\frac{1}{2}$ inch) antero-lateral to the cranial outline, the zygomatic arch being visible. The



Fig. 6. Skull from Catterline Cist.—*Norma lateralis*.

superciliary ridges are also markedly projecting. The outline is roughly pentagonal, with a relatively large bi-parietal measurement as compared with the bi-temporal. The skull is brachycephalic, with a cephalic index of 85 approximately.

Norma lateralis (figs. 6, 7).—The vault is relatively high and dome-shaped as compared with the modern Aberdeenshire skull. The frontal eminences are well marked, smooth, and rounded. The superciliary ridges are much pronounced in their whole extent. Theinion is well marked, there is flattening of the parieto-occipital region, while the sub-occipital is fuller than in the Aberdeenshire skull of the present day.

Norma occipitalis (fig. 7).—The outline suggests that the intact norma occipitalis formed a pentagon, with vertical and horizontal diameters approximately equal. The parietal eminences are high up and well rounded.

Norma frontalis.—Little is left of this aspect. Face height cannot be gauged. The facial margin of the orbit is roughly rectangular, its

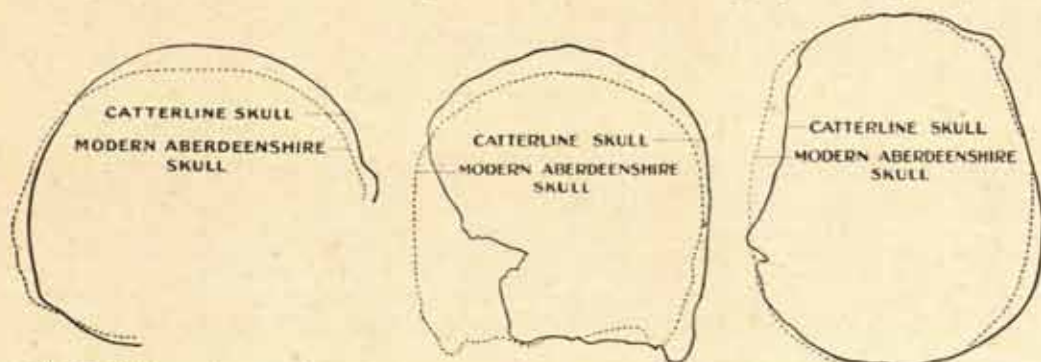


Fig. 7. Outlines of norma lateralis, norma occipitalis, and norma verticalis of Catterline Skull (continuous lines), superimposed on those of modern Aberdeenshire Skull (dotted lines). Skulls oriented in Frankfurt plane. (↓.)

long axis is directed downwards and outwards, but, from the incompleteness of its lower and inner walls, no reliable orbital index can be obtained.

Norma basalis.—The digastric groove and other sites of muscular attachment are well defined. A detached portion of the right superior maxilla shows the alveolar process supporting a canine, two bicuspid, and three molar teeth, and part of a large-sized antrum of Highmore, into which project fangs of the second and third molars, particularly the latter. The antrum extends well behind the fang of the third molar. The teeth are large, their grinding surfaces are much rubbed down, but no pulp cavity is exposed. There is marked post-mortem wasting of the outer surface of the alveolar process.



Fig. 8. Lateral aspect of mandible of Catterline Skull, superimposed on modern Aberdeenshire example. (↓.)

Mandible (figs. 6, 8).—This bone is well developed, with the chin prominent. All the teeth are present. They are large, free from caries, show marked attrition exposing dentine, but the pulp cavity is in no case visible. The alveolar process supporting the two posterior molars has an inward inclination, the teeth being inside the planes of the ascending rami. There has been much post-mortem wasting of the

outer plate of the body of the mandible, especially on the left side, the fangs of the teeth being freely exposed externally. The tubercles, affording attachment to the muscles of the tongue as well as other muscular markings, are very pronounced. The depressions for lodging the sublingual and submaxillary salivary glands are deep and continuous with one another. The right ascending ramus (the only one present) is somewhat broader from before backwards and shorter from above downwards than it is in the modern mandible. The coronoid process, which affords attachment to the temporal muscle, seems blunter, and the notch between that process and the condyle is shallower, and has a sharper margin than is seen in the present-day lower jaw.

Vertebrae.—The vertebrae present in whole or in part are the first two cervical, six thoracic, and five lumbar. They are large bones and, with the exception of the cervical, much decayed. They are covered, particularly on their eroded surfaces, with the white powder already mentioned.

Pelvis.—The first four segments of the sacrum are present, with the exception of the right side of the second, third, and fourth, lateral to the sacral foramina. The sacral curve is very slight and the anterior sacral foramina very large. The bone is much decayed in front. The coccyx is absent.

The left innominate bone is complete save for the portion which helps to form the pubic angle. Its iliac fossa is particularly cupped and hollow in the region over which the iliac muscle glides. The acetabular depression is large and shallow. Of the right bone, the acetabulum with the adjacent portions of ilium, ischium, and pubis alone remains.

When the sacrum and innominate bones are fitted together the measurements of the brim may be approximately obtained. The transverse diameter is found to be 118 mm. ($4\frac{7}{16}$ inches), the conjugate or antero-posterior diameter 110 mm. ($4\frac{3}{16}$ inches), and the right oblique diameter 117 mm. ($4\frac{5}{8}$ inches). The pelvic index is therefore 93.22. An index of 93.22 is mesatipellic, and considerably higher than that of the average European male, which is 80 (Vernau), implying that the inlet of the pelvis is considerably narrower than that of a present-day European male.

Extremities.—All the long bones are very strong and massive, have their curvatures much pronounced, and their sites for muscular and ligamentous attachment extremely well marked.

Clavicle.—Both clavicles are present, but the acromial end of the left is wanting. The length of the right clavicle is 167 mm. ($6\frac{5}{8}$ inches).

Scapula.—Both scapulae are incomplete. The greater portion of the blade of the left bone is absent. The axillary border and lower angle of the right are present, and the sites of origin of the teres muscles

are very conspicuous. The suprascapular notch is broad, and shallow in the portion which remains of the left bone.

Humerus.—Both bones are present, exhibiting large deltoid eminences. The coronoid fossæ are not perforated. The length of the right bone is 351 mm. ($13\frac{1}{2}$ inches) and of the left 347 mm. ($13\frac{7}{10}$ inches). The torsion angle of each humerus is 19° .

Radius.—The right bone is complete. The upper third of the left is present, but much decayed. The length of the right radius is 273 mm. (10 inches).

Ulna.—The upper two-thirds of the right ulna and the upper third of the left bone are present. Both are somewhat decayed.

Bones of hand.—Of the bones of the right hand, the scaphoid, os magnum, trapezoid, metacarpal bones of thumb, index and middle fingers, together with three phalanges, and, of the left hand, the unciform, pisiform, second, third, and fifth metacarpals, and four phalanges are present. They are somewhat decayed, and seem to suggest that they are relatively small with regard to the size of the other bones of the skeleton.

Femur.—The left bone is complete. The head and neck with small trochanter, and the lower extremity are the only parts remaining of the right bone. These latter fragments are much decayed. The extreme length of the left femur is 515 mm. ($20\frac{3}{10}$ inches); the upper third of its shaft is pronouncedly flattened from before backwards, with a platymeric index of 66.25. The pilasteric index is 113.3.

Tibia.—The whole of the right tibia is complete; the middle third of the shaft of the left tibia is in fragments, covered with the white phosphatic substance and embedded in a matting of roots already mentioned, and a noticeable feature is that the calcium phosphate is deposited in the cancellous tissue of the fragments in large, clear crystals. The extreme length of the complete tibia is 417 mm. ($16\frac{5}{8}$ inches). Its shaft is flattened from side to side, so that its platynemic index is 60.71. According to French statistics, this index is from 70 to 80 in white, and much below these figures in savage races. The head of the bone is somewhat retroverted, and the middle of the anterior border of the facet for articulation with the astragalus is unusually prolonged forwards and upwards.

Fibula.—The left fibula is complete, but only the upper two-thirds of the right remains. There is remarkable fluting of the shaft. The anterior border forms a projecting ridge bounding a large hollow surface for the attachment of peroneus longus and brevis muscles, and looks much more forward than usual. On the posterior surface the area for attachment of flexor hallucis longus is very extensive. The extreme length of the fibula is 414 mm. ($16\frac{3}{10}$ inches).

Patella.—The left patella is the only one present, and the appearance of the area for insertion of the quadriceps extensor cruris muscle indicates that this muscle has been a very powerful one.

Bones of the foot.—The astragalus and os calcis of the right foot, and all tarsal and metatarsal bones, with three phalanges of the left foot, exist. They are strong bones in a good state of preservation, with well-marked muscular and articular facets.

The right astragalus measures 64 mm. ($2\frac{1}{2}$ inches) in total length. The length of its neck is 23 mm. ($\frac{9}{16}$ inch). The index is 35.9, and the angle of its neck is 10° . The left astragalus is 63 mm. ($2\frac{1}{2}$ inches) in length, and the length of its neck is 23 mm. ($\frac{9}{16}$ inch). The index is 39.6, and the angle of the neck is 9° , while the modern adult European astragaloid index varies from 24 to 43 and the angle from 10° to 12° . In both astragali the trochlear surfaces project in a slightly pointed fashion upon the upper surfaces of the necks of the bones.

Sternum.—The presternal and mesosternal portions are present but separate from one another, the level of separation being that of the second costal cartilages. The approximate length of the pre- and meso-sternal portions together is 140 mm. ($5\frac{1}{2}$ inches), and the greatest width of the presternum is 74 mm. ($2\frac{9}{16}$ inches) and of the mesosternum 36 mm. ($1\frac{3}{8}$ inch).

Ribs.—The first and last ribs on the right side are the only ones present. On the left side the only one absent is the twelfth. The only feature particularly noticeable is that the upper edges of the necks project markedly upwards as well-marked crests, thereby affording better attachment for ligaments connecting the ribs with the vertebræ.

The stature of the individual, as calculated from the various bones, according to the formulæ of Professor Karl Pearson, is:—

From femur	1781 mm.	(5 feet 10 inches)
" humerus	1722 "	(5 " 7 $\frac{1}{4}$ ")
" tibia	1777 "	(5 " 10 ")
" radius	1752 "	(5 " 9 ")

The intermembral index of 67 points to the fact that the upper limbs were shorter than the lower limbs, and in proportion to the lower limbs are shorter than those of present-day Europeans. The retroversion of the upper extremities of the tibiæ, and the forward prolongation of the lower articular facets of these bones so that they may rest upon the necks of the astragali, suggest the idea that the individual may have assumed a squatting position when at rest, and may have walked with his knees somewhat bent.

The skeleton exhibits characters common to the other skeletal remains recovered from short cists and preserved in the Anatomical Museum of

the University of Aberdeen. The only characters in which it appears to differ from them is that its height (5 feet $7\frac{3}{4}$ inches to 5 feet 10 inches) is greater than their average height (5 feet 4 inches), and that the capacity of its skull (1600 c.c.) is larger than theirs (average 1458 c.c.).

Urn.—The urn (fig. 9) is an example of the low-brimmed type of



Fig. 9. Urn from Catterline Cist.

beaker or "drinking-cup," with a distinct neck about the junction of its upper and lower three-fourths. About three-fourths of the brim and nearly one-third of the side are missing. The external measurements are as follows:—

Height	.	.	.	191 mm. ($7\frac{1}{2}$ inches)
Diameter of brim	.	.	.	184 " ($7\frac{1}{5}$ ") approx.
" neck	.	.	.	165 " ($6\frac{1}{2}$ ")
" bulge	.	.	.	178 " (7 ")
" base	.	.	.	95 " ($3\frac{3}{4}$ ")

The thickness of the wall is 19 mm. ($\frac{3}{16}$ inch).

The average thickness of the base is 18 mm. ($\frac{7}{16}$ inch).

The paste is very coarse and brick-red in colour externally, changing to a darker brown on the inner aspect. The surface of the urn shows four bands of ornamentation passing horizontally round the vessel, separated by unornamented areas. The pattern consists of horizontal, vertical, and cross-hatched lines, which had evidently been executed by a notched die impressed on the clay while soft.

Implement.—The implement (fig. 10) of quartzite, which rested near the



Fig. 10. Stone Object from Catterline Cist. (1.)

middle of the right forearm, on the floor of the cist, is part of a sea-beach pebble. It is conical in shape, with its sides very roughly chipped and its base formed by the smooth surface of the pebble. Its extreme height is 27 mm. ($1\frac{1}{16}$ inch), and the diameter of its base is 42 mm. ($1\frac{7}{16}$ inch).

TABLE I.

Measurements in mm. of Skull from Upper Mains of Catterline,
Kinneff and Catterline, Kincardineshire.

Sex	Male
Cubic capacity	1600 c.c.
Glabello-occipital length	184 mm.
Nasio-inional length	179 ..
Cephalic index	85 approx.
Nasio-inional longitudinal arc	330 mm.
Symphysial height	30 ..
Coronoid height	61 ..
Condylod height	56 ..
Gonio-symphysial length	98 .. approx.
Breadth of ascending ramus	37 ..
Condylod-symphysial length	131 ..

Measurements
of mandible.

TABLE II.

Measurements in mm. of Bones of Extremities.

Sex					Male	
					Right.	Left.
Clavicle	.	.	.	.	167	...
Scapula	.	.	.	.	...	...
Humerus	.	.	.	.	351	347
Ulna	.	.	.	.	...	...
Radius	.	.	.	.	273	...
Radio-humeral index	.	.	.	.	77.78	...
Femur:—						
Maximum length	.	.	.	.	...	515
Platymetric index	.	.	.	.	...	66.25
Pilasteric index	.	.	.	.	...	113.3
Humero-femoral index	.	.	.	.	...	67.4
Tibia:—						
Maximum length	.	.	.	.	417	...
Platynemic index	.	.	.	.	60.71	...
Femoro-tibial index	.	.	.	.	81 approx.	...
Fibula	.	.	.	.	...	414
Intermembral index	.	.	.	.	67	„

It is of interest to mention that the adjoining parishes of Kinneff and Dunnottar, particularly in the neighbourhood of the site of the Upper Mains of Catterline cist, have been very fertile in the production of cists of a similar kind.

About 200 yards north-east of the Catterline site, according to the information derived from local residents, four stone cists were found in a gravel pit on the farm in which the Catterline cist was discovered. Nothing is known of what became of them or their contents except that possibly the large cup-and-ring-marked stone noticed by Dr Barron of Dunnottar at the farmhouse of Upper Mains of Catterline, and now presented by him to the Anthropological Museum of Aberdeen University, may have been associated with these burials. That stone is now placed alongside of the Catterline cist in that Museum.

At Cosey Corner, 1 mile south and near the sixth milestone from Stonehaven, several cists and urns were recovered within living memory in a gravel mound that was being removed.

About 150 years ago the cairn on the St John's Hill was opened, and in it there was a stone cist containing "rich black earth having a mixture of half-burnt bones and bits of oak charcoal without any kind of urn." (*Statistical Account of Scotland*, 1796.)

At and near the Law of Largie, 2½ miles south, others are recorded as having been found.

On the farm of Auchindrich two cists were exposed—one between the

Law of Largie and the farmhouse of Auchindrich, the other further north (Ordnance Survey Map, 1901). Not far from these, in a field on the farm of Pitearry, tradition has it that a stone cist was unearthed.

A stone cist was found near the site of Druid's Camp, Druidsdales.

In the parish of Dunnottar, and also within 3 or 4 miles of the Catterline site, the following finds have been recorded:—Stone cist and urn found at Kernoon; stone cist and urn on the farm of Lampool, near the north-west end of the Loch of Lumgair, in 1864; stone cist and urn 200 yards north-east of the last one, in 1859; stone cist and urns at Burns' grandfather's farm of Clochnahill; stone cist and urn at Brucklaywaird; stone cist and urn at Carmont; stone cist and urns at Garbertstrypes; stone cist and urn near Lindsayfield.

As to the date of "short cist" burials in the North-east of Scotland, it is impossible at present to come to any definite conclusion, but we agree with most archaeologists in thinking that these burials date about the middle or perhaps the earlier part of the second millennium B.C.

III.

THE SO-CALLED CATRAIL. BY JAMES HEWAT CRAW, F.S.A.Scot.

"The identity of Junius of the Letters has not called forth greater variety of suggestion than has this mysterious earthwork." What first excited interest some fifty years before the letters were written continues in some ways one of the unsolved mysteries. It is still worth consideration if only to notice some of the fallacies which have been revived from time to time since they were refuted almost sixty years ago.

In many districts of our country, from the South of England northwards, there exist works of unknown antiquity called black-dykes, devil's-dykes, Grim's dykes, and other such names. They consist of a trench with an accompanying mound, of widely varying dimensions, and run across country with a curiously winding course, being frequently traceable for many miles. The stupendous trench and mound of the Cambridgeshire Devil's Dyke, and the long line of Offa's Dyke on the Welsh Marches, are perhaps the best known works of this description.

The most famous in Scotland has become known as the Catrail. The common conception of it is that of a great trench with a mound on either side extending from Peel Fell at the west end of the Cheviot range to the fort and broch at Torwoodlee, near Galashiels. Its course has been supposed to extend with a great curve some fifty miles in length

across the county of Roxburgh by Robert's Linn, The Pike, Northhouse, and Hosscote, entering Selkirkshire near Kingside Loch and crossing Ettrick Water above Gilmanscleuch. The supposed line then crossed Yarrow near the Feus; curving north by Minchmoor, and possibly entering for a space the county of Peebles, it continued along the heights to Linglie Hill opposite the town of Selkirk. From there the course lay by the Howdenpot Burn, Rink, and the outskirts of Galashiels to Torwoodlee.

Of over forty writers who have described the Catrail, it may be sufficient to refer to five, whose work for originality or completeness demands consideration.¹

(1) Alexander Gordon, in his *Itinerarium Septentrionale* published in 1727, first mentioned the Catrail, stating that no writer had previously described it. At several points he is admitted by subsequent writers to have been mistaken.

(2) George Chalmers, in *Caledonia* (1807), followed Gordon at most points and gave further details of the course. He did not personally survey the ground, and his informant appears to have been frequently misled regarding the character of tracks in the supposed line.

(3) Sir James Murray (then Mr Murray), in a short address to the Hawick Archæological Society in 1864, refuted for the first time many of what I believe to be the fallacies of earlier writers on the subject.

(4) James Smail, in the *History of the Berwickshire Naturalists' Club* for 1879, contributed a fuller account of the work than had previously been given. He admits not having read Mr Murray's paper, and adheres to the older theories.

(5) Francis Lynn has given, in the *Proceedings of the Society of Antiquaries of Scotland* for 1897-8, the most detailed description of the Catrail, with plans from which one may follow the line he indicates.

Among other writers may be mentioned Professor Veitch, who, in his *History and Poetry of the Scottish Border* (1878), deals chiefly with the name and purpose of the work; and Alexander Jeffrey, who, in *The History and Antiquities of Roxburghshire* (1855) treated the subject on the lines followed by Chalmers, and aroused much discussion at the time.

The conception of a continuous line, or of a series of more or less connected sections forming a unit, appears after considerable investigation to be without foundation and contrary to facts which anyone interested may ascertain for himself.

¹ A full bibliography of the Catrail is given in *Archæologia Æliana*, Third Series, vol. xix, p. 158 (footnote), 1922.

The so-called Catrail may, from the writer's interpretation of such facts, be divided into five parts as follows (fig. 1):—



Fig. 1. Map of the Catrail.

(A) The true Catrail, situated in the county of Roxburgh and extending from Robert's Linn (near which it can be seen from the railway a $\frac{1}{2}$ mile from the north end of Shankend tunnel on the Carlisle line)

to the Hoscote Burn. This black-dyke covers a distance of $13\frac{1}{2}$ miles, the line for considerable stretches being defined by the course of streams. It seems to be the only work entitled to the name Catrail, which was locally unknown elsewhere till recent times.

(B) The Picts' Work Ditch, to use the local name for this section, extending from Linglie Hill to Mossilee, near Galashiels, a distance of $4\frac{1}{4}$ miles. This portion is cut in two by the river Tweed, but the two sections are most probably parts of the same work, being in alignment. At the southern extremity on Linglie Hill the end of the trench is neatly rounded off and has no appearance of having been carried further; to test this point more thoroughly, I made a cutting immediately beyond the end of the trench and found the hard subsoil entirely undisturbed by previous excavation. The same result was obtained a $\frac{1}{2}$ mile further west, where previous writers on the Catrail imagined they found it. The trench for some 40 yards at its termination on Linglie Hill has been only half excavated, suggesting a sudden stoppage of the work. Lynn's supposed line on Cribs Hill near this point is clearly modern. A and B, according to my own judgment, are the only works of any note in the whole line partaking of black-dyke type; the north-west end of the former is some $13\frac{1}{4}$ miles from the south end of the latter in a direct line, and the course of the two works does not suggest any connection between them.

(C) From Peel Fell to Robert's Linn, a distance of 7 miles, the most ardent supporters have found but meagre fragments, none of which really appears to be of black-dyke type.

(D) Between the Hoscote Burn and Linglie Hill the line is supposed to have taken a wide sweep of $22\frac{1}{4}$ miles. The great majority of tracks in this section are certainly not black-dykes: the few which are of that character appear to be of much slighter construction than A and B. There can be little doubt that Sir James Murray proved the fallacy of previous writers in regard to this portion. He also ascertained that Sir Walter Scott and Laidlaw, after much search, had come to the conclusion that no such work as the Catrail crossed Selkirkshire. It is inconceivable that a work of such proportions could have been obliterated on the hard moorland of the Selkirkshire hills within a century of Gordon's time.

(E) It is significant that the early writers claim nothing beyond Mossilee. It was not till about 1867 that William Kemp discovered a fragment extending 2 miles to Torwoodlee, which was later followed to the Gala beyond it—a total extension of some 3 miles. It must be admitted that the whole of this portion, which extends through low and mostly cultivated ground, is likely to be less evident than it was

fifty years ago; but for the same reason one would expect it to have been most evident to the earliest investigators. Some of the parts left here are certainly of later date; only one portion (in a strip of wood a $\frac{1}{4}$ mile south-east of Torwoodlee broch) has much resemblance to a black-dyke, and it is of smaller dimensions than the Mossilee portion.

We thus find ourselves compelled to abandon as a myth the so-called Catrail, with its glamour and mystery, and to consider in its place two portions of black-dyke—the true Catrail and the Picts' Work Ditch—the deepest and most important, if not the longest, of many black-dykes in the Border country. Of the date of these works we have no definite evidence. What was their purpose? That they were roads we cannot suppose: roads keep to hard ground, these do not; roads seek fords, the Catrail at two points makes a sheer drop into a stream; roads do not extend from the head of one stream over a watershed to the head of another with no trace of continuation down the rocky gorge on either side; neither are they carried straight over a ridge like the Pike, where a slight deviation would avoid a climb of 700 feet in little over a $\frac{1}{2}$ mile, with a troublesome descent on the other side; and finally, they do not run through hill tarns such as that on the north side of Linglie Hill.

That these works were defensive earthworks is almost as unthinkable; their course and construction do not suggest such a purpose. To quote again from Sir Herbert Maxwell, whose words form our introduction: "If that was the origin and purpose of the Catrail, it is to be hoped that the Britons were better Christians than they were military engineers."

We now find ourselves left with the last of the theories regarding these works: that they were merely boundaries. The only objection to this surmise rests on the apparently unnecessary depth and width of the trench for such a purpose, the measurements exceeding at some points 6 feet and 25 feet. If we consider, however, that we know nothing either of the importance which the makers attached to this boundary—if such it were—or of the amount of labour at their command, we shall probably admit that the objection is not sufficient to set aside the theory; and there for the present we must let the matter rest.

IV.

THE EXCAVATION OF COULL CASTLE, ABERDEENSHIRE.

By W. DOUGLAS SIMPSON, M.A., F.S.A.Scot.

I. HISTORICAL INTRODUCTION.

The ruins of Coull Castle stand on a prominent knoll of red granite about 200 yards south of the parish kirk of that name, in the south-eastern corner of the Howe of Cromar. Its position is a most commanding one. The view embraces the entire Howe, one of the most beautiful districts in Aberdeenshire; a fertile basin enclosed by a fine range of hills which, commencing in Mörlich (1248 feet), immediately behind the castle, sweeps round by the north through Pressendye (2032 feet) to culminate westward in the noble mountain of Morven (2862 feet)—Byron's "Morven of Snow"—whose great bulk and fine outline (seen in the background, fig. 15) lend character to the whole district. Through this Howe flows the Tarland Burn, sweeping in a deep narrow gully past the west side of the kirk and castle. At present the burn appears a more formidable defence to the castle on this side than it really was in the Middle Ages, for its channel was deepened and canalised early in the last century, in order to drain the flats below the village of Tarland.¹ Previous to that operation these flats were largely marshland, and are still known as Bogmore. A yet earlier stage in the physiography of the district is revealed by the large trees—oak, fir, and alder—which are frequently dug up in the soil of this ancient marsh, sometimes at a depth of 8 feet below the present surface.²

¹ Mr W. Middleton Stewart, Aberdeen, informs me from private sources that this drainage was effected in 1840. In the *New Statistical Account* for the parish (vol. xii. p. 958), written in August 1842, reference is made to the operation. "There is a considerable extent of level ground in the centre of the parish, called Bogmore. It consists of alluvial deposit on moss. At one period it was generally covered with water, and formed a disagreeable, unhealthy swamp. By recent draining the greater part of it has been brought into cultivation, the remainder has been converted into good pasture, and the climate has been greatly improved." Even previous to this work of drainage, however, the bottom-land cannot all have been marsh, for we are told by Spalding (*Memorials of the Troubles in Scotland and in England*, vol. ii. p. 472) that on Sunday, 11th May 1645, the Covenanted Lieutenant-General Baillie "marchis to Cromar, and campis betuixt the kirkis of Coull and Tarian."

² In the *New Statistical Account*, cited above, occurs the following passage: "The oak appears to have once flourished here, a specimen of enormous size having been recently dug up on the farm of Wester Coull, and two large beams of oak, rudely joined together by blocks of wood, were lately found in a piece of mossy ground near the manse." It is a great pity that the exact place of this discovery had not been specified, as the description of mortised woodwork at once suggests a crannog.

I am indebted to Mr Charles B. Bisset, M.A., B.Sc., for the following geological note on the site of the castle:—

"The castle is built on a boss of granitic rock which occurs where the flat land of the Howe of Cromar begins to rise and grade into the drift-covered slopes of the Hill of Mortlich. The rock-mass is a marginal offshoot from a tongue of granite extending roughly from Tillylodge to the summit of Mortlich Hill. It appears as a rocky eminence in the valley which the Tarland Burn, emerging from the flat, has cut in the surrounding glacial deposits. The burn traverses the rock in a steep-walled gorge, at the entrance to which it formed a loch. On leaving the gorge it spread out to form a marsh—some indications of which still remain. The loch and marsh have been drained by an artificial deepening of the stream's channel, apparently to a depth of about 20 feet. Thus the site stands out from the valley side, and sloped steeply down, in its former condition, to a loch on the north-west, to a rock-gorge occupied by a stream on the south-west and south, and to marshy ground on the south-east. On the north and north-east the rock-surface slopes up and merges into gently rising ground. Artificial protection has been got here by the rock-cut ditch. The site, though not the highest point in the immediate neighbourhood, is not actually dominated by any other eminence. Buildings of any height would ensure an adequate view in all directions."

Coull Kirk is one of the oldest Christian sites in Aberdeenshire, being a foundation of St Nathalan (died 8th January 678), whose centre of influence was at Tullich, further up the Dee valley, where a fine collection of Celtic sculptured stones still marks the early importance of the place.¹ Between 1188 and 1190, William the Lyon granted the church of Cul in Mar, with its lands, teinds, oblations, etc., to his new foundation, the great Abbey of St Thomas the Martyr at Arbroath.² The present kirk dates from 1792, but occupies the ancient site, and is correctly oriented, or nearly so (8° S. of E.). Its rather fine Renaissance belfry belongs to the previous church, and houses a Dutch bell dating from 1642.³ At Coull, as elsewhere, we see the mediæval church and castle side by side, representing respectively the ecclesiastical and the civil *nuclei* of the

¹ For St Nathalan and Tullich Kirk see my article in *The Deeside Field*, pp. 16-8. The Breviary of Aberdeen says that Nathalan founded the churches of *Tullicht*, *Bothelin* (Bethelnie = Both-Nathalan, the cell or church of Nathalan), and *Colle*. Bishop A. P. Forbes (*Kalendar of Scottish Saints*, p. 419) says that *Colle* is Cowie, near Stonehaven, and quotes a rhyme said to be in use among the fishermen there in regard to "Saint Nauchlan's hoard" at Cowie. On the other hand, the "View of the Diocese of Aberdeen" (1732), paraphrasing the Aberdeen Breviary, says that Nathalan "built the churches of Bethelny, Cowl, and Tullich," and elsewhere states that "Cowl Church was dedicated to St Nachlan"—*Collections on the Shires of Aberdeen and Banff*, pp. 131, 633. The evidence associating Coull with St Nathalan, apart altogether from the geographical probability, seems fairly good.

² *Antiquities of the Shires of Aberdeen and Banff*, vol. ii. p. 27. The names of the *villæ* in the parish are thus given in a marginal note on the charter: Ester Tochres, Wester Tochres, Ochter Cule, Galaun, Davata de Kule.

³ The inscription on the bell is as follows: "SOLI DEO GLORIA · MICHAEL BURGERHUYS M(e) F(ecit) 1642." A shield bears the Ross arms (a chevron between three water-buckets), with the inscription "INSIGNIA · ALEXANDRI · ROSSII · IN · MIL · DE · COVL · ME · DONANTIS."

parochial organisation introduced by the Anglo-Norman immigrants into Scotland in the twelfth century. Close eastward (see map, fig. 1) is the farm of Mains of Coull, representing the ancient demesne land attached to the castle; further down the Tarland Burn is the site of the Mill of Coull; while at about three-quarters of a mile to the south-east, on a spur of Mortlich, is the Gallowhill (seen in the background, fig. 21), a prominent knoll upon whose summit the gibbet, standing starkly forth with its ghastly burden against the morning sky, must have been a grim

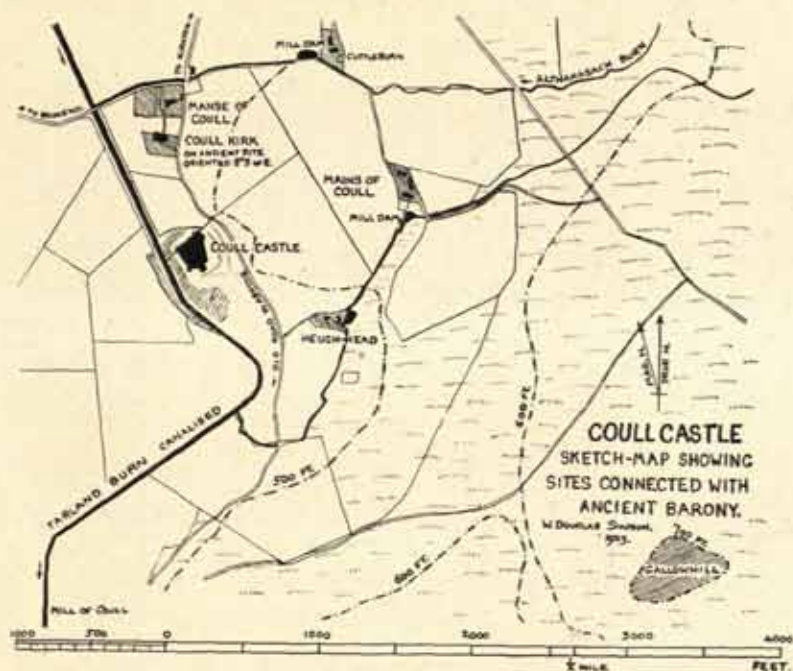


Fig. 1. Map of Coull Castle and Neighbourhood.

and constant reminder, to the *villeins* in the Howe, of the reality of "Baron's Law."

The Castle of Coull was the great stronghold of the Durwards, the hereditary Door-wards (*le Uissier, Hostiarius*) of Scotland, the powerful family who in the middle of the thirteenth century held the destiny of the kingdom in their hands. The family name was properly de Lundin (? in Fifeshire), but their origin is not known. They came to Coull as the result of a long dispute between Thomas de Lundin or le Durward and Duncan, Earl of Mar, from whom de Lundin claimed the earldom through his mother, a daughter of Orabila, Countess of Mar, and her first husband,

Gilchrist. The dispute was settled apparently about 1228,¹ and it seems that the Durwards then acquired a great portion of the Mar earldom, including the southern half of the Howe of Cromar, and stretching in the one direction northwards to Alford and in the other eastward to Skene. Their territories also extended down Deeside to Invercanny, and included the Feugh valley at least as far as Strachan. The main stronghold of this wide domain, known as the barony of O'Neill, was at Coull, where doubtless Thomas de Lundin, soon after he obtained the lands, erected his powerful stone castle of the *enceinte* type, just then coming into vogue in Scotland. At Lumphanan and Strachan the Durwards also possessed peels or fortresses of the earlier type, consisting of earthen mounds surrounded by a fosse and carrying on their summits timber buildings enclosed by a stockade.²

Little is known about Thomas le Durward, but he evidently took a close personal interest in his northern lordship, for we know that he constructed a bridge over the Dee at Kincardine-O'Neill.³ About 1231 he was succeeded by his son Colin, who, as Lord O'Neill, is said to have received a royal charter from Alexander II. confirming to him the lands of Coull, Kincragy, and le Corss.⁴ Colin in turn gave place before 1233 to his brother Alan,⁵ one of the great figures in Scottish history during the thirteenth century. Alan Durward married Marjorie, an illegitimate daughter of Alexander II.; and for some time during the minority of that King's son he was Regent of Scotland. He died either in 1268 or in 1275, and his lands were divided among his three daughters. The barony of O'Neill, however, does not seem to have fallen under his succession, but reverted to the Crown, and was afterwards granted to the Earl of

¹ Among an inventory of documents handed over by Edward I. to John Balliol in 1292 occurs the following entry: "*Item in uno sacculo existente in eadem maletta veteri, una pixis sigillata, in qua est compositio inter Comitem de Mar et Thomam Ostiarium, olim facta.*" No doubt this was the same document as the one contained in the roll of recognitions including amongst other things, "*negocium tangens comitem de Marr et Thomam le Usser,*" found among the records of the Treasury at Edinburgh Castle in 1291. See *Acts of the Parliaments of Scotland*, vol. I., Appendix to Preface, pp. 6, 10.

² About the history of the Castlehill at Strachan little authentic information is forthcoming. It is figured in Dr A. Bremner's *The Physical Geology of the Dee Basin*, p. 71. On the other hand, the Peel of Lumphanan was a stronghold of great consequence in its day, and was visited by Edward I. on 21st July 1296. The best historical notice of this important moated mound is that contributed in 1843 to the *New Statistical Account* of the parish (vol. xii. pp. 1089-91, and 1095) by Dr Joseph Robertson—a full and accurate account, forecasting in remarkable fashion modern conclusions regarding the age and purpose of such mottes.

³ "*Hospitali . . . sito iuxta pontem quem pater meus fecit construi super Dee.*" *Confirmatio Alani Hostiarj data hospitali de Kyncardyn*, 3rd March 1233 (*Registrum Episcopatus Aberdonensis*, vol. ii. pp. 268-9).

⁴ *Castles of Aberdeenshire*, p. 23. I have been unable to trace the authority for this statement. The date given, 1234, appears inconsistent with the fact that Alan Durward's charter to the Hospital of Kincardine, quoted above, proves him to have held the lands in the previous year.

⁵ Colin is designated Alan's brother in a charter of Logie Durno, 1251—*Chartulary of Lindores*, ed. Bishop J. Dowden, p. 86.

Fife. On the death of Alexander III. in 1286, Duncan, Earl of Fife, was appointed a co-Regent of Scotland, but on 25th September 1288 he was assassinated. Thereafter his widow, Isabella, continued to hold his domains. On the Thursday before the Feast of All Saints, 1299 (*"le Dymeigne procheyn deuant la Feste de Toutz Seintz en lan dil incarnacioun nostre Seignur mil e deus centz nonant e neefe"*), Countess Isabella executed a deed conveying to Sir John de Hastings, Lord of Abergavenny (*"monsieur Johan de Hastings, Seignur de Bergeueneye"*), her lands of Coull and Lumphanan with their pertinents in the shire of Aberdeen (*"Koule e Lunfanan oue les apurtenances en conte de Aberdene"*), along with other properties in Scotland and England. The grant is stated to be in discharge of a debt which the Countess is unable to meet because of the war in Scotland and the depredations of Sir Herbert de Morham, who has seized her goods and chattels (*"per la greuance de la guere Descocce et dil rauissement Sir Herberd de Morham qi mes biens e mes chateux moi rauiste"*). On his part, Sir John de Hastings agrees to pay the Countess £80 sterling per year for life. This transaction received the approval of Edward I., who on 1st November 1299 issued in letters patent his writ of *inspeximus*.¹ We obtain an insight into Sir Herbert de Morham's misuse of the Countess in a writ of the English King, under date 22nd April 1299, directing a jury to inquire into "the charges brought by Johanna de Clare, Countess of Fife, against Herbert de Morham of Scotland, that while she and her retinue under the King's safe-conduct were on their way to England, he laid wait for them between Stirling and Edinburgh, and took her by force to his brother Thomas's house of Gertranky, where he imprisoned her because she would not consent to a marriage with him, under her oath to the King not to marry without his licence, and seized her jewels, horses, robes, and goods, to the value of £2000, to her grave loss and scandal, and in contempt of the King, who is greatly commoved thereat."² When first we hear of this ruffianly knight, in May 1296, he is among the Scottish prisoners at Buckingham Castle. At the time when Edward ordered him to stand his trial for the misuse of Countess Isabella, he was serving in the English garrison of Edinburgh Castle. Evidently he succeeded in escaping the wrath of the mighty Plantagenet, for the next that is heard of him is as a commander of the "insurgent Scots" who captured Stirling Castle at the end of 1299. He was specially excepted from the amnesty agreed upon between Edward's commissioners and Sir John Comyn in February 1304, but nothing seems to be known as to his ultimate fate.³

¹ *Antiquities of the Shires of Aberdeen and Banff*, vol. ii. pp. 29-30. Cf. J. Bain, *Calendar of Documents relating to Scotland*, vol. ii., No. 1108.

² Bain's *Calendar*, vol. ii., No. 1006.

³ *Ibid.*, Nos. 1132, 1469, 1473, 1949: vol. iv., No. 1768.

On 17th March 1302, Edward I. ordered his Chancellor, John de Langton, to issue letters under his great seal, re-enfeoffing Countess Isabella in her English lands, "which she has agreed with Sir John de Hastings to get back with the King's leave";¹ but the Scottish territories of the Countess were not included in this bargain, and Sir John must have continued to hold Coull Castle for the English King. In July 1305, John, Earl of Athole, addressed a petition to King Edward, in which he points out that whereas he was authorised by the King and Council to draw revenues up to 1200 merks from the town of Aberdeen and the fermes of Aboyne, Coule, Mortleye, and Botharme, he has received from them only £540, which sum he has spent in repairing the Castles of Aberdeen and Aboyne, and garrisoning each with 20 men-at-arms and 40 sergeants-on-foot. The petitioner continues that he has now been ordered by the King to deliver the land of Mortleye to the Earl of Buchan, and the land of Coule to the Countess of Fife, and that Sir Aymar de Valence holds the land of Botharme; and therefore prays that the King would please to take some order regarding his sustenance under the said assignment. On the petition is endorsed the following decision: "The King's pleasure is that Sir Aymar de Valence hold the land of Butharm, and the Earl draw his fixed assignment from the Chamberlain of Scotland."²

John de Strathbogie, Earl of Athole, whom we thus discover in occupation of Coull in 1305, was Edward's warden and justiciary north of the Forth. In the year following he joined Bruce's insurrection, was one of the defenders of Kildrummy Castle, and, being captured at or shortly after its surrender, was hanged by Edward's order, his royal descent being tactfully recognised in the provision for him of a gallows 30 feet higher than usual.

Sir John de Hastings, Lord of Abergavenny and of the great estates of the Countess of Fife on both sides of the Border, was one of the claimants to the Scottish throne in 1291, a trusted servant and confidant of Edward I., and some time Seneschal of Aquitaine. That he was ever personally in residence at Coull Castle is doubtful. According to Barbour, he was Governor of Brodick Castle, Arran, at the time of Douglas's attempt on it early in 1307.³ In July or August 1307 he was ordered by Aymar de Valence, Earl of Pembroke, Edward's viceroy in Scotland, to report for service with the garrison of Ayr, and on 30th September 1307 instructions are issued to him by Edward II. to proceed into Galloway in order to aid the viceroy, Sir John of Brittany, Earl of Richmond, in putting down Robert de Brus, who is

¹ Bain's *Calendar*, vol. ii., No. 1299.

² *Ibid.*, No. 1682.

³ Barbour's *Bruce*, ed. W. M. Mackenzie, p. 67.

"burning and plundering, and inciting and compelling the inhabitants to rebel."¹

As to the fortunes of Coull Castle during these stormy years nothing is known. After the war it reverted to the Earls of Fife,² but later in the fourteenth century was held for a time by the Douglasses. The barony of Neell and of Coule (*terris baronie de Neell et de Coule infra vicecomitatum de Abreden*) is mentioned in a charter granted by David II. on 12th February 1354 to William, Lord of Douglas, confirming to him all the lands that belonged to James, Lord of Douglas, his uncle, and Archibald of Douglas, his father. In this charter the lands of Coull and O'Neill are included among those having belonged to Sir Archibald Douglas, but when and how they came into his possession is not known.³ It is probable that they may have been alienated temporarily owing to the defection of Duncan, Earl of Fife, who joined Edward Balliol and the English party after the battle of Dupplin (12th August 1332), and was captured at Perth. He took part in David II.'s invasion of England in 1346, was captured at Neville's Cross (17th October), sent to the Tower, and condemned to death by Edward III. (then in his lines before Calais) as a traitor from his allegiance previously sworn to Edward Balliol. Owing to his relationship to the English King—his wife, Mary de Monthermer, was a granddaughter of Edward I.—he was pardoned, returned to Scotland, and died between 1353 and 1356.⁴ His daughter and heiress, Isabella, was the last of her family to hold Coull.

Among the Drum charters is a grant by James, Earl of Douglas and Mar, between 1377 and 1384, to Sir Thomas de Harkar, of the lands of Largeny (Learney), in the barony of Cowle in Mar. The manor of Cowle (*manerium de Cowle*) is mentioned as the place of the chief court of the barony.⁵ On 22nd June 1389 the barony of Cowll and O'Neill, with the fortalice thereof, was resigned into the King's hands by Isabella, Countess of Fife,⁶ and on 12th August in that year was bestowed by Robert II. on his son, afterwards the famous Duke of Albany.⁷ On 18th February 1398, Albany executed a deed, confirmed by Robert III. on 5th March following, granting to his son, John Stewart, the barony of Coule and O'Neill. In these two deeds the various possessions and rights

¹ Bain's *Calendar*, vol. ii., No. 1961; vol. iii., No. 15.

² Charter of Robert I. to Duncan, Earl of Fyffe, of the barony of Oneill, in the sheriffdom of Aberdeen—W. Robertson, *Index to the Missing Charters*, p. 16.

³ Sir William Fraser, *The Douglas Book*, vol. ii. p. 586, vol. iii. pp. 300-1.

⁴ See W. Wood, *A Short Account of the Earls of Fife*, pp. 42-63.

⁵ J. F. Leslie, *The Irvines of Drum and Collateral Branches*, pp. 9, 28. In 1446, James II. granted the lands of Largnye, in the barony of Neale in Coule, to Sir Alexander Erwyn of Drume, on the resignation of John de Halliburtonne of Saulnye—*ibid.*, p. 48.

⁶ Sir John Skene, *De Verborum Significatione*, 1681, *sub verbo Arage*.

⁷ *Antiquities of the Shires of Aberdeen and Banff*, vol. ii. pp. 30-1.

conveyed are minutely specified with all the precision beloved of the mediæval lawyer; but in neither is any mention made of Coull Castle. The *reddendo* in John Stewart's charter is one silver penny yearly at the capital place of the said barony. (*"Soluendo inde annuatim predictus Joannes filius noster et heredes sui quibus deficientibus ceteri sui fratres filij nostri et heredes sui antedicti unum denarium argenti apud capitalem locum dicte baronie in festo Pentecostes nomine albefirme tantum si petatur."*¹) John Stewart, Earl of Buchan, who thus obtained the barony, was one of the most distinguished soldiers of his time. Being sent with a Scottish army to aid King Charles VI. of France against the English, he was ultimately made Grand Constable of France, and fell on the stricken field of Verneuil (17th August 1424), where the Scots auxiliaries were slain off almost to a man. In 1437 the lands of Coull were vested in the Crown, and on 12th November in that year James I. granted a charter under the Great Seal to John Fyfe of Essintuly of the lands of Balbedy, in the barony of Coule, within the sheriffdom of Aberdeen.² On 10th October 1482, James III. granted a charter of "all and several our territories of the barony of O'Neil, to wit Coule, Kincragy, and le Corss" (*"omnes et singulas terras nostras baronie de O'Neil, videlicet terras de Coule, Kincragy, et le Corss"*), to his armour-bearer, Patrick Forbes, ancestor of the Forbeses of Corse, a family distinguished for their learning and piety in the seventeenth century.³ On 11th January 1511, David Forbes of Corse received a charter from James IV. of the lands of Onele, Cors, Kincragy, and le Muretoun, uniting them into a barony, to be called the barony of O'Neil.⁴ Previous to this grant the lands of Coull had been disjoined from the barony of O'Neill, and on 19th February 1492 were acquired by Alexander Irvine of Drum on the resignation of Patrick Forbes of Corse.⁵ In the Exchequer Rolls from 1442 to 1529 there occurs a series of entries of the fermes of Coull uplifted on the King's behalf, and of its second tithes paid over to the Bishop of Aberdeen. Between 1442 and 1446 the fermes are drawn by Lord Forbes as sheriff-

¹ Charter in Dr Geo. Burnett's *Family of Burnett of Leys*, pp. 160-1.

² Crawford, *Lives of the Officers of State in Scotland*, 1726, p. 25, quoted in *Antiquities of the Shires of Aberdeen and Banff*, vol. ii. p. 30, footnote 1.

³ *Collections on the Shires of Aberdeen and Banff*, pp. 607-8; *Registrum Magni Sigilli* (1424-1513), No. 1518. Corse Castle, romantically situated about 4 miles north-east of Coull, is a fine ruin in the baronial style of the later sixteenth century. Over the door is the date 1581, with the initials W. F. (for William Forbes) and E. S. (for Elizabeth Strachan).

⁴ *Reg. Mag. Sig.* (1424-1513), No. 3530.

⁵ Charter of the lands of Cowle, in the barony of Onele, within the sheriffdom of Aberdeen, *Reg. Mag. Sig.* (1424-1513), No. 2085. A charter of confirmation was granted by James IV. on 4th February 1505—*ibid.*, No. 2923. In the latter document we are told that Alexander Irvine held the lands from the King: "*pro quibus vero tunc existerat sub summonitione ad instantiam regis; quam summonitionem rex annullavit pro singulari favore et pro bono servitio, necnon pro certis pecuniarum summis sibi persolutis.*"

depute of Aberdeenshire. On 25th November 1452 the lands of Coule are stated to be in the hands of the King from last Martinmas owing to the decease of the Countess of Buchan, who evidently had liferented them. In 1455 the fermes are remitted to Master Richard Forbes, Archdeacon of Ross, and formerly Chamberlain of Mar. In 1492 they are received by the Comptroller from Patrick Forbes (of Corse); and from 1498 onwards they are mentioned as in the hands of Alexander Irvine of Drum.¹

By a charter dated at Edinburgh on 27th February 1554, the Queen-Regent grants to Alexander Irwyng, nephew and heir-apparent of Alexander "first of Drum," all the estates in possession of the Drum family, which Alexander senior had resigned. Amongst them are mentioned "the lands of Cowle with their castle and mill, in the sheriffdom of Aberdeen (*ac cum terris de Cowle cum earum castro et molendino, vic. Abirdene*)."²

Although the history of Coull Castle is so provokingly meagre, it is linked with a group of distinguished men, each of whom—Alan Durward, John de Hastings, John de Strathbogie, the Duke of Albany, and the Earl of Buchan—played an important part in his time, both in Scotland and beyond her borders; while its long connection, in later years, with the Scottish reigning house of Stewart gives the castle a special interest. From the collections of Sir James Balfour (1600-57) we learn that it was already in ruins during the first half of the seventeenth century. "Hard by the parishe church of Coule," he writes, "ther is to be seine the ruines of ane ancient grate castle, called Coule Castle, the chiefe duelling of the ancient Lordes Durward, of quhom was descendit *Allanus Ostiarius, Comes Atholiæ et Justiciarius Scotiæ, regnante Alexandro II. Indo Scottorum Rege, in anno 1230.*"³ In 1725 it is mentioned as "an old ruinous castle, south from the church, called the Castle of Coul."⁴ In the "View of the Diocese of Aberdeen" (1732), we are told that Whitehouse, in the parish of Tullich, was "so called as being the only house in Cromar built with stone and mortar, since the ruin of the two old castles, Cowl and Migvie."⁵

The starting-point of the excavations now under review is to be found in a very interesting notice of the castle contained in the old *Statistical Account* of the parish, dated 1792, which is herewith subjoined.

"The most remarkable fragment of antiquity in this parish is the Castle of Coull; it is situated about one-fourth of an English mile south of the Manse. Not many years ago there was scarcely anything to be seen at all, but a number

¹ *Exchequer Rolls*, vols. v.-xv., ref. in Indices.

² *Reg. Mag. Sig.*, 1546-80, No. 897.

³ *Collections on the Shires of Aberdeen and Banff*, p. 86, footnote 1.

⁴ *Antiquities of the Shires of Aberdeen and Banff*, vol. ii, p. 26.

⁵ *Collections on the Shires of Aberdeen and Banff*, p. 640.

of little green hills and the remainder of an old wall about 30 yards long and 10 or 12 feet thick; the ruins were buried in the ground, and might have continued hid from mortal view, had not a scarcity of manure induced people to dig about the old wall for rubbish; in doing this, they came upon the remains of four gates and five turrets of very extraordinary dimensions. These last, as nearly as can be guessed, for it is impossible to measure them exactly on account of their broken state, will be about 18 or 20 feet diameter; the walls in those places which seem most entire are 15 feet thick, built with lime and stone throughout; one of the gates, which is not so much demolished as the rest, is closed above with a Gothic arch of freestone; this gate is 9 feet wide, 12 feet high, and 15 feet thick. The whole work, as far as can now be traced, appears to have been a square measuring about 50 yards on each side. It is only a very small portion of it that is yet opened up; three sides of it, in a great measure, are still underground. Among the rubbish dug up were found several small pieces of silver coin with this inscription, '*Alexander Rex Scotorum.*'"¹

Despite its very circumstantial appearance, this account is not without its difficulties. The "remainder of an old wall, about 30 yards long and 10 or 12 feet thick," described as above ground before the plunder of the site commenced, may have been either the north or the west curtain, though neither approaches the thickness indicated. Doubtless the four gates included entrances to some of the towers, or to the domestic buildings within the courtyard. The remark that the towers could not be measured exactly "on account of their broken state," implying that only parts of their circumference were extant when first discovered, has an important bearing on the problem of the ultimate fate of the castle, to be discussed hereafter. The language of the notice suggests that all the towers were about the same in diameter, 18 to 20 feet—a measurement which agrees well enough (if taken interiorly) with the gatehouse tower and the donjon, but not with the north-west tower, which is much smaller. Also none of the curtain walls are anything like 15 feet thick, except the east curtain, which is even thicker. The width given of the gate with the "Gothic"—i.e. pointed—arch agrees fairly well with the width (12 feet) of the trance as established in the recent excavations, for the actual portal would of course be contracted by the jambs. The usual width was sufficient to admit three men-at-arms abreast. On a more general view, the statements that "only a very small portion" of the castle was exposed, and that "three sides of it, in a great measure, are still underground," are not easy to reconcile with the assertion that five towers had been dug out. Indeed, the "howk" for lime must have been a truly enormous one if an excavation on such a scale actually took place. One wonders how much precisely of the building had been revealed by these sporadic diggings.

¹ *Statistical Account of Scotland*, vol. iii. p. 201. In the *New Statistical Account*, vol. xii. p. 950, the towers are described as hexagonal. Finally, in Alex. Smith's *New History of Aberdeenshire*, part i. p. 365, we read of "four hexagonal towers and five turrets."

After having thus been partially exposed, the ruins again became completely buried, and the 25-inch Ordnance Survey Map (last edition, 1902, Aberdeenshire, sheet lxxxii. 5) gives a very accurate plan of the earthworks and surface appearances, entitled "Site of Coull Castle." In 1912 the estate was purchased by Mr A. Marshall Mackenzie, LL.D., R.S.A., F.S.A.Scot. Himself a distinguished architect, Dr Marshall Mackenzie was naturally interested in the architectural achievement of his predecessors at Coull; and he commenced excavations on the site with a view to discovering what still remained to our own time of this powerful and early fortress. Continued until interrupted by the war, his operations resulted in the discovery of the donjon, part of the adjoining east curtain, the south curtain and postern, and the inner wall of the inhabited range, which was exposed along its whole front towards the courtyard. At the opposite end of this wall a small part of the north curtain was revealed, and some indication of the north-west tower. So matters remained until 9th September 1922, when the Deeside Field Club visited Coull Castle. In his address on that occasion Dr Marshall Mackenzie expressed his desire to resume the work of excavation, and complete the recovery from oblivion of one of Scotland's oldest and greatest castles. I then suggested to him the possibility of carrying out the work with the aid of a party of Boy Scouts, like the excavation conducted by me at Kildrummy Castle in 1919.¹ The following section will present a general report of the results achieved both by Dr Marshall Mackenzie's original excavations, and by the continued researches under my direction during the past summer.

II. ACCOUNT OF THE EXCAVATIONS.

Two very different types of castles were in use in Scotland during the thirteenth century. One, the older type, was the *motte*, or earthen mound enclosed by a ditch at base and having on its flat summit wooden buildings within a "peel" or palisade. Often there was a large bailey, or outer court, attached to the mound, enclosed by a ditch and a stockaded bank (see Duffus Castle, fig. 2, No. 1). This was the kind of castle in use throughout Normandy and England during the twelfth century, and was introduced into Scotland by the intruding Anglo-Norman baronage in the reign of David I. (1124-53). To this more primitive style of castle belonged the other Durward strongholds at Lumphanan and Strachan. The second type, introduced about the beginning of the thirteenth century, was constructed in stone and lime, and in Scotland, as elsewhere in Western Europe at this period, took

¹ See *Proceedings*, vol. liv, pp. 134-45.

the form of a bailey or courtyard, enclosed with strong curtain-walls defended by round or square flanking towers. These stone castles of the thirteenth century in their turn are capable of classification into two categories, an older and a newer type. The older type is characterised, in its fully developed form, by a single defensive envelope, and by the presence of a donjon or keep, which is simply one of the flanking

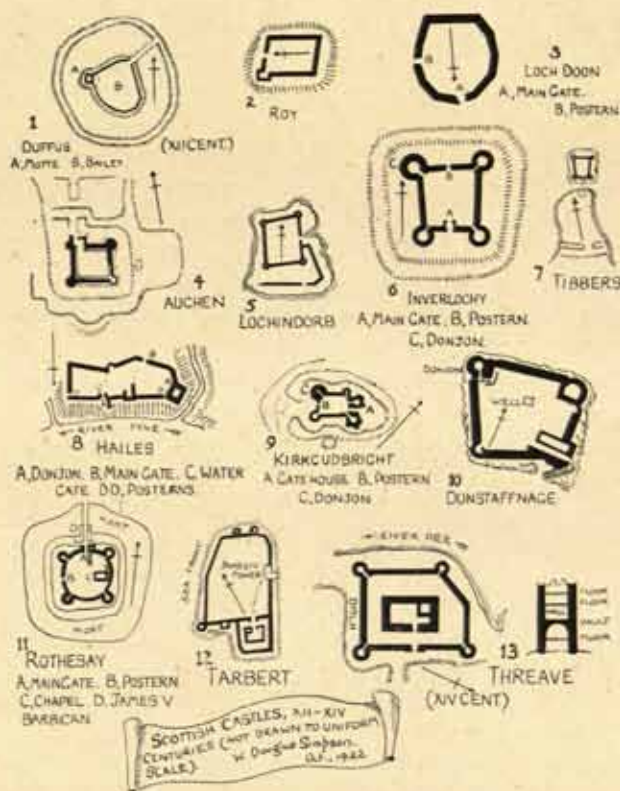


Fig. 2. Types of Early Scottish Castles.

towers upon the curtain, larger and stronger than the others, furnished usually with its own water-supply, and capable of isolation from the rest of the castle, so that it formed a last redoubt or *place d'armes*, a citadel wherein resistance could be maintained even after the curtains had been mined, breached, or scaled. This type of castle was in use throughout Scotland during the whole of the thirteenth century. The simplest examples, such as Mingary and Loch Doon (fig. 2, No. 3), consist of a mere quadrangular or polygonal wall, undefended by towers; but

others, such as Dunstaffnage (fig. 2, No. 10), Kirkcudbright (fig. 2, No. 9), Inverlochy (fig. 2, No. 6), Kildrummy, and Bothwell, exhibit far higher development. These castles have powerful flanking towers, a donjon, and a strongly defended gatehouse—more approaching the grandeur and elaboration of their contemporaries in England and France. About the end of the century, during the period of the English occupation, a new type of stone castle was introduced into Scotland. It is derived from the great concentric or "Edwardian" fortresses of which such splendid examples still exist in Wales—a province that, conquered just at the period when mediæval military engineering reached its climax, was secured by some of the grandest castles to be seen anywhere in Europe. In the Edwardian type of castle, the characteristic features are the arrangement of concentric envelopes or lines of defence, and the absence of a donjon. In place of the donjon there is what may be termed a "keep-gatehouse," which contains the fortified trance beneath and state apartments above, forming both a gatehouse and a keep or citadel to the whole castle. A number of the great Welsh concentric castles are illustrated in fig. 3. Beaumaris and Rhuddlan exhibit this arrangement in its ideal state, but in the others it has been modified to suit the ground, although in all the concentric principle has been maintained—i.e. the inner ward can be reached only through the outer. As one would expect, the Scottish concentric castles are much feebler, alike in design and execution, than their great English counterparts. An excellent example is Tibbers (fig. 2, No. 7), which is known to have been constructed in 1298 by a Scottish knight, Sir Richard Siward, in the pay of Edward I.¹ It is therefore a valuable proof of the English derivation of these keepless and concentric castles in Scotland. The inner ward, with its flanking towers, gatehouse, and lack of a donjon, is well developed. The outer ward seems to have been defended only by a bank and ditch; and, though it does not enclose the inner ward, the latter is elsewhere surrounded by marshland, and can be entered only through the outer ward, so that the castle is truly concentric in its conception. The Castles of Buittle and Auchen (fig. 2, No. 4) are examples of fully formed concentric fortresses, but on both the outer envelope is of earthwork only. The southern castle at Caerlaverock appears to have been of the same type. At Lochindorb (fig. 2, No. 5) the outer envelope is a stone curtain, concentric so far as the crannog-site allows. After the War of Independence a complete change came over Scottish military architecture. Under straitened circumstances the baronage abandoned the courtyard type of castle, and began to

¹ See *Royal Commission on the Ancient and Historical Monuments of Scotland; Report on Dumfriesshire*, No. 157.

build strongholds on the plan of a square tower-house with an appended barmekin, or fortified enclosure, usually on a reduced scale (see Threave Castle, fig. 2, No. 13). It is from this period onwards that Scotland, thrown back on her own resources by the breach with England, began to develop a separate national style in castle-building. Hitherto her military architecture follows, though at a distance, the development

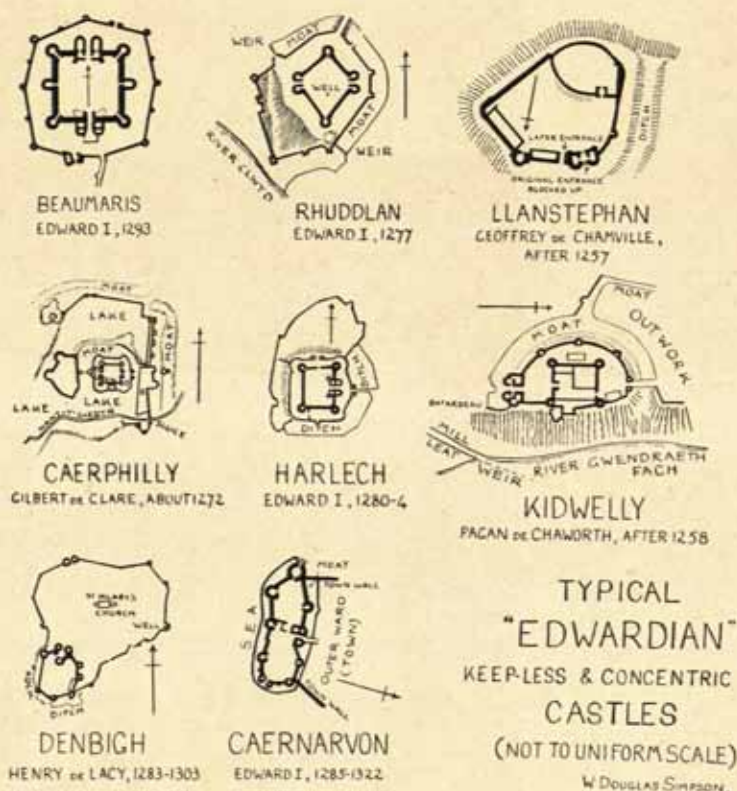


Fig. 3. Typical Edwardian Castles.

of the English castle through the three stages indicated—(1) the *motte* castle of earth and timber; (2) the stone castle with a single envelope and a donjon; (3) the keepless and concentric castle of the Edwardian age.

General Description.—Erected comparatively early in the thirteenth century, the Castle of Coull belongs to the older type of stone fortress characterised by a single envelope and the presence of a donjon. Of this type it has been one of the largest and most fully developed

instances in Scotland. It consists (see plan, fig. 4) of a spacious irregular courtyard, apparently pentagonal in outline, enclosed by strong curtain-walls with round flanking towers, having a fortified entrance on the east side,¹ and the domestic range, or inhabited part of the castle, along the opposite or west curtain, which was the safest position, both because most remote from the gate, and also because the curtain here overhangs

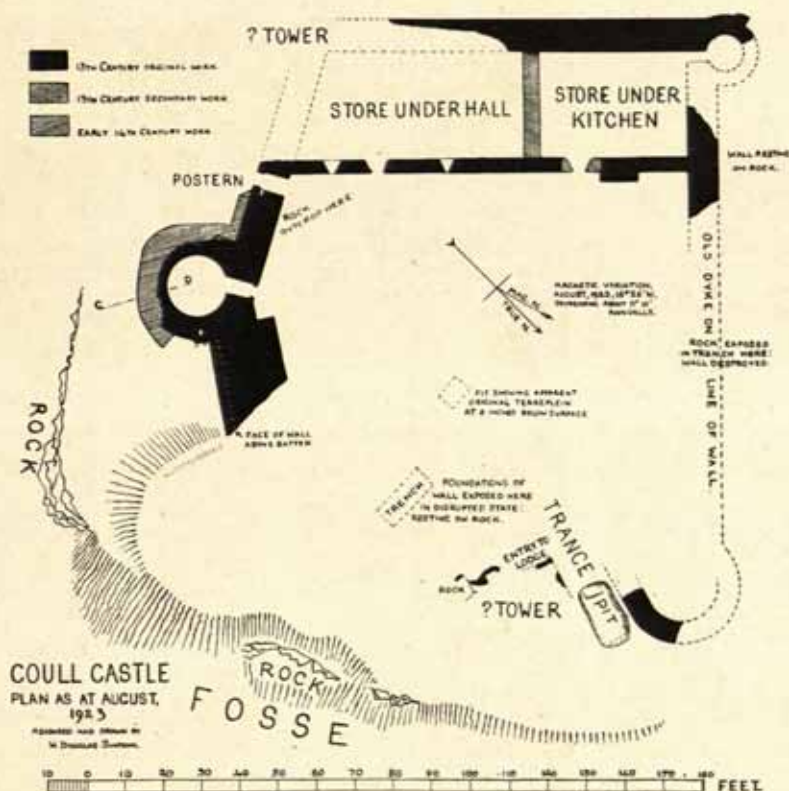


Fig. 4. Coull Castle: Plan.

the steep bank of the Tarland Burn. This west curtain is 8 feet 3 inches thick, and has been about 100 feet in length. At the north-west corner, and doubtless also at the south-west corner, it was flanked by a round

¹ For convenience of reference I have throughout assumed that the castle is set to the cardinal points. Actually (as will be seen from the plans) the gatehouse fronts almost north, the "north" curtain faces north-west, and the "west" curtain looks to the south-west. The magnetic variation at Coull Castle in August 1923, when the survey was made, has been extracted for me by the Director-General of the Ordnance Survey, and was $16^{\circ} 26'$ W., decreasing about $0^{\circ} 10'$ annually. It should be noted that disturbances are somewhat greater in the Highlands than elsewhere. At Ballater the observed variation is $0^{\circ} 30'$ less than the catalogued variation.

angle-tower. The north-west tower, of which somewhat under one-half is preserved, has been about 9 feet 10 inches in internal diameter, within walls 3 feet 8 inches thick. Owing to the presence of the Tarland Burn on the west side, its salient is nearly all towards the north, upon which front it has been about two-fifths engaged with the curtain. From this tower the north curtain, which is 7 feet 8½ inches thick, has run at right angles, and apparently in a straight line, for a distance of some 122 feet to the gatehouse at the north-east angle. Only a very small portion of this curtain, towards its west end, is extant. The gatehouse is now in a very fragmentary condition, but appears to have consisted of two strong flanking towers with a deeply recessed trance, about 12 feet wide, between them, and in front of the portal a large pit sunk in the solid rock. Only a length of some 18 feet of the inner wall of the north tower remains, showing how its circular outline had passed back into a straight face along one side of the trance. In its circled portion this tower had been 17 feet 6 inches in diameter internally, and the wall at the base is 6 feet 4 inches thick. The pit measures 18 feet long, 8 feet 6 inches broad at half its length, and 5 feet deep below the rock surface. From the gatehouse the east curtain has returned, in a more or less curved outline, along the line of, but at some distance back from, the scarp of the ditch, until it meets the great tower or donjon at the south angle of the castle. This curtain is almost entirely destroyed, save for a length of some 27 feet, terminating at the donjon. In this part the wall, for reasons suggested hereafter, reaches the enormous thickness of 18 feet. The donjon has been reconstructed, but in its original state it had been a powerful tower, measuring about 15 feet in internal diameter, within walls 7 feet in basal thickness. It caps a low angle in the curtain-wall, which beyond it returns in a westerly direction to meet the west curtain, with which it has made an obtuse angle, doubtless provided with a tower. Beyond the keep the curtain-wall, as originally built, was 8 feet 3 inches thick, and is pierced by a postern gate. The inhabited part of the castle, along the west curtain, is 27 feet 4 inches in internal breadth, and has been arranged in the usual fashion of a mediæval house—a basement containing storage beneath the great hall on the first floor, with the kitchen at the lower or north end of the hall, and the lord's private apartment ("solar," "great chamber," or "chamber of des") at the upper end, doubtless in the missing south-west tower. The total frontage of the inhabited range, within the courtyard, measures about 104 feet.

The levels of the castle are somewhat peculiar. The highest part of its area is occupied by the east curtain, from which the ground slopes very slightly towards the ditch on the exterior side, and rather more

steeply on the inner or courtyard side. Reckoning along the section A B (figs. 20, 11), a pit sunk in the courtyard, where shown on plan, fig. 4, revealed what seemed to be undisturbed, stratified fluvio-glacial sand at 6 inches below the sward. If this is so, the ancient surface-level thus indicated is about 8 feet below the rock foundation of the east curtain,¹ as exposed in the trench (shown on plan) cut athwart it a little south of the line of section. On the other side of the courtyard, the foundations of the inner wall of the inhabited range are 7 feet below the unexcavated surface, or about 12 feet below the base of the east curtain. These measurements indicate that the courtyard must have had a fairly steep slope towards the west, or possibly a terrace. The west curtain, and the south curtain west of the donjon, are about level; but the east curtain ascends very steeply from the donjon to the highest point, just where it is breached, from which point it has descended more gently towards the gatehouse. On the other side of the gatehouse the north curtain ascends gradually to a point somewhat short of half its length, after which it descends fairly sharply towards the north-west tower. The castle seems to be very largely founded on bed-rock. An area of ice-worn surface crops out just inside the postern, the jambs of which rest on rock; rock was exposed in various trenches cut to find the foundations of the east and north curtains; the floors of the north-west tower and of the donjon consist of rock; and the base of the gatehouse tower rests directly upon the rock in which the pit is excavated.

The Donjon.—Its general character and dispositions having thus been briefly indicated, I may now proceed to describe the castle in detail. And first of the "great tower" or donjon, which is the most imposing fragment of the castle that remains (fig. 5). The internal area of this tower is about 15 feet in diameter, and the walls as originally built had been about 7 feet in basal thickness, battering with a very steep rake to a vertical height of about 5 feet. The tower is entered by a doorway and passage in the gorge wall. The door, which is at the outer end of the

¹ On this matter Mr Charles B. Bisset has kindly furnished me with the following geological report:—

"With regard to the sand-pit in the courtyard, I have ascertained the following facts:—

- (1) It does not contain lime.
- (2) It contains sharply angular chips and fragments of rock.
- (3) It is at a little below the level of the top of the pit at the gatehouse.
- (4) It is stratified and sorted.

"Perhaps the most important fact is the presence of these angular rock-fragments. This points strongly to the probability that the stratified sand was formed after some demolition had taken place and was not there before the castle was built. In view of this, I suggest that you should qualify any statement you may make about it till you get it dug out thoroughly."

The matter is thus *sub judice*, but in the meantime it may be observed that if the sand really was formed subsequently to the demolition of the castle, it is hard to understand how it could contain no lime.

passage and has closed against the courtyard, is about 3 feet in breadth, and has well-wrought jambs in freestone with a check and a plain external chamfer. A bolt hole about $1\frac{1}{4}$ inch in diameter still remains on the west side, with the groove, 10 inches long, worn by the bolt plying against the adjoining cheek of wall. Between two of the rybat stones beside it is a rusted iron bat. The total length of the passage, from the exterior of the door to where it opens into the tower, is 7 feet 8 inches. At present the tower stands about 17 feet 6 inches above the bed-rock upon which it is founded, exposed in a pit sunk during the recent excavations. No trace of a floor scarcement, mortise-holes,



[Photo W. Norrie.

Fig. 5. Coull Castle : Donjon, looking east.

or vaulting exists in the interior of the tower; nor are there any visible means of communication with the upper storeys.

In the east re-entrant of the tower is a garderobe flue (fig. 6), consisting of a roughly built projecting structure resting on two massive unwrought stones which serve as corbels. The vent between the corbels is about 4 feet 6 inches above the foundation of the tower, the exterior height of which is about 11 feet. When cleared out from above the flue was found to be carefully built, measuring 1 foot 4 inches by $10\frac{1}{2}$ inches, with a pronounced outward rake at its base. The position of this garderobe in connection with a mural tower is quite characteristic, and is paralleled at Lochindorb, Dunstaffnage, Dirleton, Bothwell (see plan of gatehouse, fig. 14), and Kildrummy. It is explained by the fact that the towers were generally used as permanent quarters for the garrison. At Coull there appears to have been no provision for cleaning the garderobe, and the soil was probably removed from the outside, possibly with the assistance of

water poured down from above. One of the garderobes at Bothwell has a contrivance for flushing it by means of water let in from the inner moat.



[Photo W. Norrie.

Fig. 6. Coull Castle: East Curtain and Garderobe in Donjon.

The donjon bears evidence of having suffered extensive damage and partial reconstruction at an early date. As originally built, the very steeply battered plinth of its base—which rises straight from the founda-



[Photo W. Norrie.

Fig. 7. Coull Castle: Postern Gate and South Curtain, showing added "apron."

tions without intervening vertical courses—is carried westward along the adjoining south curtain. Against this plinth there has later been built a new batter (fig. 7), of a much gentler rake, which is continued all round the base of the donjon (fig. 5) to a point on the east face, where it returns at right angles into the older wall (fig. 8). In the west re-entrant of the tower (fig. 9) the upper courses of the original batter are seen emerging

above from behind the addition. At a distance of about 3 feet out from the re-entrant the original face of the tower stops with a broken edge;



[Photo W. Norrie.

Fig. 8. Coull Castle: Return of added "apron" into wall of Donjon.

and the added batter is carried, across the breach, in behind the original outline of the tower—the outer face of which, for a considerable portion of its circumference, had been previously removed to such an extent that



[Photo W. Norrie.

Fig. 9. Coull Castle: South Curtain and Donjon, showing added "apron."

the remnant of the vertical wall above the batter is now, in most places, only 2 or 3 feet thick (see plan, fig. 4). The exposed ragged hearting of the original wall, reduced to this thickness, still stands to a height of 2 or 3 feet above the new batter, which has been built directly up against it. This huge batter or "apron," with its almost beehive profile (fig. 5)

and very irregular outline on plan, is a most extraordinary structure, uncouth and hurried alike in design and execution. The masonry of the addition differs markedly from that of the more ancient walls against which it is built (figs. 7, 9). The facing of the earlier work may be described as roughly coursed rubble of "heathen" boulders with pinnings inserted very irregularly, behind which the heart of the wall is composed of smaller stones and chips grouted in a copious bath of mortar. In the added masonry the facing is made up of uncoursed boulders set very closely together and with far less frequent use of pinnings. In the interior of the tower the two kinds of masonry are again visible in sharp contrast (fig. 10), the older or coursed work being *above* the uncoursed work, which lines the base of the tower to a height varying from 2 to 6 feet above the rock-level exposed in the pit dug in the centre. From this it is evident that, after the "apron" had been built round the tower outside, the lowest courses of the damaged wall had been removed on the interior and replaced by under-pinning masonry similar to that employed in the outward addition.



[Photo W. Norrie.]

Fig. 10. Coull Castle: Interior of Donjon, looking east, showing two styles of Masonry.

The general conclusion to be drawn from a careful examination of this tower is that it has been greatly injured, evidently by a deliberate attempt to breach or mine the wall; the whole exterior face of which has been removed, as shown on plan (fig. 4), for the greater part of its circumference, leaving only the inner 2 or 3 feet of the wall intact. To repair this destruction the enormous "apron" was built all round the injured portion of the tower; and the lower courses of the interior wall, which must have been disturbed by the mining operations, were taken out and replaced with new work. The resulting condition of the tower is illustrated by the section in fig. 11. As already stated, the fragment of damaged wall rising above the new "apron" is only about 2 or 3 feet thick; and it seems doubtful if this could ever have been carried up to any great height, or have supported floors and a roof. Whether any effort was made to carry the wall round again at its original thickness above the added batter is uncertain; but the "apron" seems to be somewhat levelled up all round as if to provide a bench for such a purpose.

The whole reconstruction is extremely interesting, and not very clear in some of its aspects; but the explanation offered above seems to be the only one that will satisfy all the circumstances. At Dirleton Castle, which was destroyed during the War of Independence, an angle-tower was pulled down to the top of its battered plinth; and, when in later years the castle was restored, the battered base was simply coped over in very rough fashion, and an angle of wall built on top.

In its original condition this donjon must have been a lofty tower, as it rises from a low level and would require to command the higher

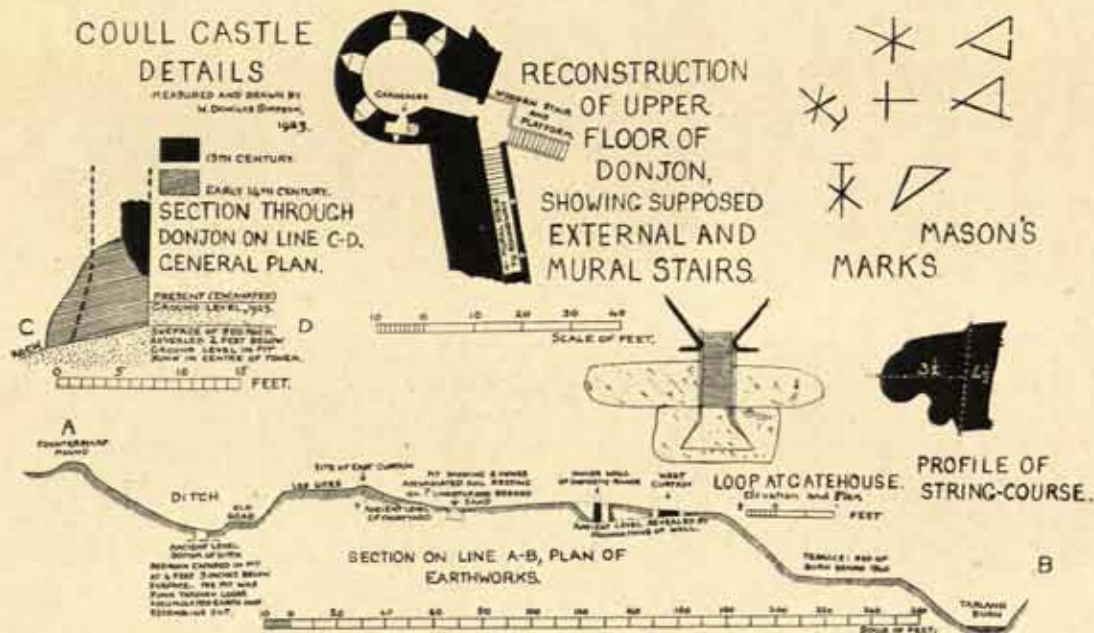


Fig. 11. Coull Castle: Details.

ground north-eastward, and the curtain-wall thereon. No doubt the wall-heads would be furnished with the hoardings or timber galleries which were the ordinary means of parapet defence in the thirteenth century. Stone-built machicolated roundways, such as are found in Scottish castles of the fifteenth century, like Craigmillar and Borthwick, were hardly known, even in France, before the fourteenth century. The enormous machicolations of the donjon at Château Gaillard, Richard Cœur-de-Lion's "daughter of a single year" (1196), were the solitary anticipation of a military genius,¹ almost unimitated for a full century

¹ See Viollet-le-Duc, *Dictionnaire Raisoné de l'Architecture Française du XI^e au XVI^e siècle*, vol. v. pp. 60-71. "Le premier, Richard remplaça les hourds de bois des crénelages par des

thereafter. At Threave Castle, built soon after 1369 by Archibald the Grim, the putlog-holes and other provision for a boarding to man the wall-head may still be seen almost entire. And in the great castle of Bothwell we may study both kinds of parapet defence, the earlier and the later, within the same building; for the donjon, or Valence Tower, still retains the stone corbels which supported its timber gallery, while the Douglas Tower, reconstructed by Grim Archibald soon after 1388, carries a very beautiful machicolated parapet in stone.

The Curtains and Angle-Towers.—On the east side of the donjon the curtain-wall, 11 feet high where it meets the tower, is preserved for a length of some 26 feet 7 inches, at which point it is abruptly broken off right down to the foundations. The wall (to the right in fig. 6), which climbs the slope steeply, has a very massive batter, 6 feet in vertical height, rising straight from the foundations. The masonry is similar to the older work in the tower and the south curtain, and is coursed up the slope of the wall—a somewhat unusual practice¹ and thoroughly bad construction, though in this case the risk of slipping is minimised partly by the donjon, acting as a giant buttress at the lower end of the curtain, and partly by the enormous spreading solidity of the wall itself, which here reaches a basal thickness of 18 feet 2 inches. An angled recess is formed on the interior of this curtain just where it meets the gorge wall of the donjon. Perhaps the recess had accommodated a wooden stair for giving access to the allure-walk and to the upper floors of the donjon. There is an arrangement of this kind at Dunstaffnage Castle. It is possible that this stair, ascending from the courtyard at right angles to the curtain, may have debouched on a wooden platform, giving access on the one side to the first floor of the donjon, and on the other side to stone steps conducting along the inner side of the east curtain up to the roundway, in the manner suggested on the reconstructed plan (fig. 11).² Such an arrangement, if it existed, would supply an additional reason for the great thickness of this curtain. A device of this sort seems necessary in view of the absence of any visible communication with the upper floors of the donjon.

mâchicoulis de pierre, conçus de manière à enfler entièrement le pied de la fortification du côté attaqué. . . . Cet ouvrage, à notre avis, dévoile, chez le roi Richard, un génie militaire vraiment remarquable, une étude approfondie des moyens d'attaque employés de son temps, un esprit pratique fort éloigné de la fougue inconsidérée que les historiens modernes prêtent à ce prince." Cf. vol. iii. pp. 82-3. It is of course questionable how far the credit should not rather be awarded to Coeur-de-Lion's engineer. We can scarcely suppose that the King himself actually designed the castle, though he may have inspired its details.

¹ Medieval walls were occasionally built in this way, for example the west curtain of Dover Castle, south of Fulbert de Douvres' Tower. This curtain, which is faced with large flints, is assigned to the thirteenth century. See *Report of the Inspector of Ancient Monuments, Year ending 31st March 1913*, p. 11.

² The wooden part of this supposed stair is not so likely to have ascended along the inside of the south curtain, since there are no putlog-holes in the wall here.

Where the east curtain is broken away, the space which intervenes between this front of the castle and the enclosing ditch is expanded into a roughly semicircular area, about 45 feet in diameter, along a portion of which, on the south side, is a small mound (see plan, fig. 4). Before the recent excavations, Dr Marshall Mackenzie and I had formed the opinion that this semicircular area covered the foundations of a large round tower, and that the mound on its south side concealed the remains of the tower wall. On excavation, however, the base of the east curtain was shown to run right across the mound on to the semicircular area, without any trace of a return. Where cut through in this section the mound was ascertained to consist merely of rubbish, and a section cut at a different point told the same story. Also trenches run across the area itself showed no traces of an occupation level. Under the meagre turf a thin layer of carbonised vegetation was found directly to overlie rotten rock, below which the bed-rock was uncovered at less than 1 foot beneath the surface. It is evident, therefore, that this semicircular area is simply an expansion of *les lices*—the terrace or *glacis* which intervenes between the castle and its ditch along the whole of this front. From where it is broken off the curtain-wall had run in a curved outline, more or less parallel to the ditch, towards the gatehouse. It has been completely destroyed, but masses of disrupted rubble-work, scattered over a bed-rock surface, were found in three trenches cut across the irregular stony mound that still marks its course.

On the other side of the donjon the south curtain, reinforced by the later "apron," runs westward for about 16 feet, at which point it is pierced by a postern gate (fig. 7). Here the "apron" terminates in a diagonal splayed stop. The postern is 3 feet 9 inches wide exteriorly, and has carefully wrought freestone jambs without an external splay. At 1 foot 11½ inches inward it is checked for a door, and on the east jamb behind the rebate is the bar hole, 1 foot 8 inches deep and 7 inches square, at a height of about 4 feet above the sole of the door. Besides providing access to the outworks on this front, the postern would afford a useful means of effecting a sally against besiegers engaged in mining the donjon. Postern gateways similarly situated with reference to the donjon may be seen at Bothwell and Dirleton Castles. The postern had been closed above with a plain round arch, three voussoirs of which were found lying beside it.

Immediately beyond the postern the inner or courtyard wall of the domestic range engages with the south curtain; and in line with the west face of this wall the curtain has been clean breached through, right to the foundation. No traces of it were recovered beyond this point, and all attempts to find the tower which must have capped the south-west angle of the castle proved abortive, though a large excavation was

made in the hope of discovering it. But dressed stones, some wrought to the curve, and jamb-stones of a door, afforded evidence of the former existence of a tower in this position.

The exterior face of the west curtain was discovered, in a more or less perfect condition, for a length of 83 feet. At its northern end it still remains to a height of about 2 feet 6 inches, and exhibits a batter; but for the greater part of its course only the foundations, in a very disturbed state, are preserved. The inner face of the wall was revealed in its northern portion, showing that this curtain had been 8 feet 3 inches thick. At the north-west corner of the castle was an angle-tower with northward salient, measuring 9 feet 10 inches in internal diameter, within walls 3 feet 8 inches thick. Only the western half of this tower

remains (fig. 12), the rest of the structure having been completely destroyed right down to the foundations. The batter along the west curtain is carried round the face of the tower, upon a roughly built projecting base-course, for a length of some 7 feet, beyond which the tower is built perpendicular. A wrought elbow returns the batter into the perpendicular wall, and is carried on a dwarf buttress of somewhat irregular shape, but measuring about 2 feet 10 inches in projection, 3



[Photo W. Norrie.]

Fig. 12. Coull Castle: Interior View, North-west Tower.

feet 8 inches in breadth, and 2 feet 6 inches high (see plan, fig. 4). The tower is built upon a very irregular rock-bottom, and where best preserved is about 7 feet high. The inner face of the west curtain is prolonged to form one cheek of a door, without rebate, leading into the tower, and there is a rock-cut step down into its interior.

Only a small portion of the north curtain was recovered, at the point where it engages with the inner wall of the domestic range. An exterior length of about 15 feet, battered, about 3 feet 3 inches in height, and resting upon rock, was exposed, and inner lengths of 13 feet and 12 feet 6 inches to the west and east of the house-wall respectively. This curtain has been 7 feet 8½ inches thick. A modern dry-built dyke now runs along the top of the curtain, extending across the north-west tower and down the slope towards the Tarland Burn. Between the point where the curtain was lost and the north-west tower,

the dyke was removed and the whole area cleared out right down to bed-rock, without any trace of the curtain being found. It is thus evident that the curtain here, with the greater part of the tower adjoining, has been deliberately destroyed down to the very foundations. The same conclusion was to be drawn from the state of matters in the other direction. Here the dyke climbs a fairly steep slope, beyond which it descends again to the gatehouse. It was hoped that the high level might conceal a considerable fragment of the curtain, but on the ground being opened up the dyke was found to rest directly upon bed-rock, exposed immediately below the turf. It seems probable, therefore, that the fragment now exposed represents all that remains of the north curtain.



[Photo W. Norrie.]

Fig. 13. Coull Castle: Gatehouse Tower, looking north-west.

The Gatehouse.—The gatehouse at the north-east angle has been terribly destroyed, but enough survives to indicate that it must have been a fully developed and strongly fortified structure.

A portion of the wall of the north flanking tower was exposed (fig. 13), measuring 17 feet 10 inches in length exteriorly, and 5 feet 9 inches in exterior height. This wall is built with a battered base extending 5 feet 4 inches vertically high, and the basal thickness of the wall is 6 feet 4 inches. Interiorly

the wall stands 5 feet 1½ inch in greatest height above the rock foundation upon which the tower rests. The tower has been about 17 feet 6 inches in internal diameter, and its wall passed back into the straight to form the north side of a long trance or fortified entry. Across the trance a small length of the opposite wall was fortunately recovered (where shown on plan, fig. 4), indicating that the passage had been 12 feet 2 inches wide. All attempts to find the companion flanking tower failed, although the ground was thoroughly trenched. Rock *in situ* was everywhere found immediately under the turf, and it seems certain that this tower has wholly perished. In rear of the trance, on the south side, a small length of wall foundation was uncovered at right angles, and at its junction with the trance wall four splayed and checked jamb-stones were taken out, overthrown but nearly in position. Evidently this lateral wall and the door-stones

are the remains of a porter's lodge opening off the entrance passage. At about 13 feet southward from this, again, were disinterred other remnants of walling (see plan, fig. 4), comprising a built recess about 3 feet 3 inches broad and 2 feet 7 inches deep, and a base-course of boulders in the form of a segmental, buttress-like structure, abutting upon a rock-face, steeply sloped, upon the top of which again were indications of a square return. The relationships of these very fragmentary remains are obscure, but doubtless they represent walls in the rear-building of the gatehouse.

In front of the entry was found a large pit, roughly hewn in the solid granite. Irregularly oval in shape, it measures 18 feet in length, 8 feet 6 inches broad at half the length, and 5 feet deep below the rock flooring of the trance, which was found at a depth of 2 feet below the turf. The sides of the pit, which are very rough and irregular, descend perpendicular for three-quarters of its depth and then run out into a level floor. In the process of clearing out this pit were revealed abundant evidences of a catastrophe. The upper part of the pit was filled with great stones representing *débris* of collapsed buildings, including many dressed fragments in freestone, and the great jamb-stones of a large gate wrought very plainly in freestone without any external splay. A great deal of charcoal was everywhere found, and as the deeper levels of the pit were penetrated larger masses of burnt wood, some as much as 3 or 4 inches in length, were dug out, of which many were evidently portions of dressed woodwork. Along with these were found quantities of large iron nails, of which no less than 153 were found in and about the pit, 31 from within its depths. Many of these nails were twisted as if with the action of heat. At the base of the pit a continuous layer of charcoal was found, varying from 6 inches to 1 foot in depth, and including, besides fragments of comminuted woodwork, charred matter of a quite different type, consisting of brushwood and small twigs. The charred woodwork and nails suggest that the bridge spanning the pit had been burned, and the incinerated brushwood was doubtless the remains of fascines used to ignite it. The jamb-stones and other dressed fragments recovered from the pit were found intermingled with, and stained black by, the charcoal, showing that the gatehouse buildings had collapsed or been thrown into the burning *débris*. Lastly, in and about the pit were found masses of slaggy substance and fused rock material, including in themselves chips of stone, and in one case showing the impression of a charred log. A bleb of melted iron about 1 inch broad was fused into one of the basal stones of the gate-tower, in such a position that it was at first mistaken for a wasted trunnion of the bridge.

This pit in front of the entrance at Coull Castle is a very interesting feature. At Bothwell Castle, another thirteenth-century stronghold, there is a house of entry (fig. 14), very like what the one at Coull must have been. The portal is deeply recessed between two flanking towers, whose opposite faces pass back into the straight walls of a long trance, carried through between guardrooms or porter's lodges in rear of the towers, while in front of the portal is a carefully constructed ashlar-lined pit. At Morton Castle, a mid-fifteenth-century building, a gatehouse of similar design occurs (fig. 14), in which the special use of

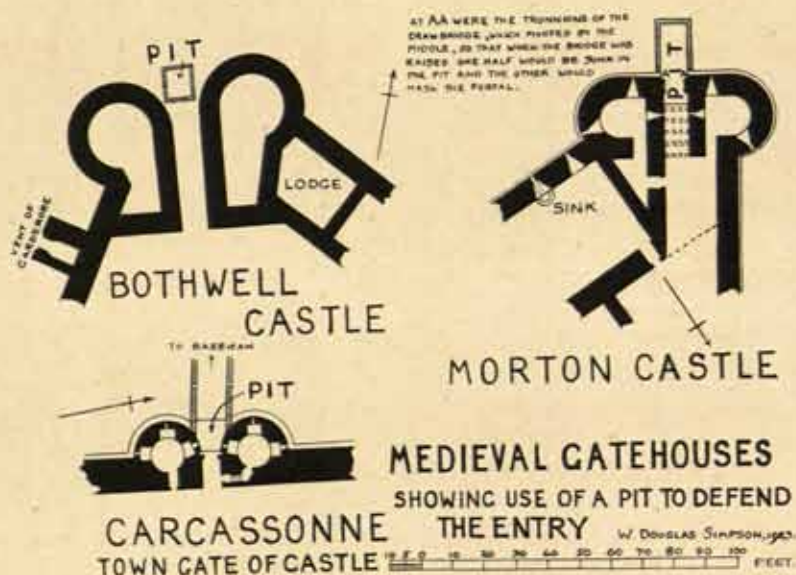


Fig. 14. Medieval Gatehouses with Pits.

the pit is more clearly apparent. Two D-shaped towers set back to back, and therefore having a lateral but no frontal salient, enclose between their closed gorges a ribbed trance defended by a portecullis and folding gates. Underneath the sill of the gateway is a long ashlar-built pit, extending back into the trance. This pit had been spanned by a bridge swung on trunnions at the threshold of the door, and so managed that when raised one portion of the bridge would be sunk in the pit, while the other projected upwards in front of the gate, to which it thus formed an additional defence. Just within this is a gate which opened outwards, and therefore could only be used when the drawbridge was down. Behind this, again, were the portecullis and an inner gate. The gatehouse of the inner ward at

the Château d'Arques has a pit of this sort, and a similar mode of defending the entry was in use at the citadel of Carcassonne (fig. 14). It is hardly necessary to say that in these and other French castles the defences of the gatehouse were designed and executed with an elaboration to which we can offer no parallel in Scotland; but none the less the principles which governed the mediæval engineer were everywhere the same.¹

The Domestic Range.—There remains to be described the inhabited part of the castle. This has formed an oblong block, 27 feet 4 inches in interior



[Photo W. Norrie.]

Fig. 15. Coull Castle: Courtyard Wall of Domestic Range, looking north-west. (Photo taken before this summer's excavations had opened up the interior of the range and disclosed the partition wall.)

breadth, extending along the whole length of the west curtain. The inner wall, towards the courtyard, is 103 feet 9 inches in length and 3 feet 9 inches thick, and in places still remains to a height of 7 or 8 feet (fig. 15). At the eastern end of the house, on the first floor, was the kitchen, of which the fireplace buttress, carried down to the ground, remains. South of the kitchen was the hall, and below all were cellars or storage rooms, unvaulted. Between hall and kitchen the partition wall (fig. 16) still remains to a height of about 7 feet, and is 4 feet thick. The kitchen had

¹ Mr G. Patrick H. Watson, F.S.A.Scot., Architect to the Scottish Royal Commission on Ancient Monuments, informs me that there is a gatehouse pit at the Edwardian Castle of Buittle, in the Stewartry. This pit is not clearly indicated in the Commission Report (Galloway, vol. II., No. 74).

been 38 feet 8 inches in length. Its chimney buttress measures 9 feet 10 inches in length, with a projection of 2 feet 5 inches, and has quoins carefully wrought in freestone. Adjoining it to the south is a door, 3 feet 8½ inches wide, also carefully fashioned in the same material. In each jamb, just behind the check, two small holes are sunk. The centre pair of holes correspond in each jamb, but the second hole on the north side is below and the second hole on the south side above. This door is evidently an insertion; and the reason for the alteration appears from an inspection of the partition, which does not bond with the courtyard wall and is clearly an afterthought, the insertion of which rendered



[Photo W. Norrie.]

Fig. 16. Coull Castle: Doorway and Partition Wall in Domestic Range.

necessary the provision of a separate entrance into the northern part thus shut off. But from the close similarity of masonry between the partition and the courtyard wall, and the complete identity of treatment, alike in dimensions and tooling, between the freestone dressings of the slapped door and those found elsewhere in the castle, together with the presence of identical mason's marks, it would appear that the alteration was made very soon after the erection of the castle, if not even when its building

was still in progress. Indeed the plan of the domestic range would postulate such a partition from the outset. Within the domestic range the inner face of the north curtain has been refaced at some period in small stones, the toothings of the ancient face still remaining at the east end.

In the other part of the house, south of the dividing wall, is a door with a narrow window on either side. The northern window (see fig. 15) is still partly preserved, and has a daylight width of 1 foot 2 inches, with a wide inward bay and a narrow external chamfer. The sill of this window is socketed for a thin central vertical bar or slat, the socket measuring about 1½ inch by ¾ inch. The other window is greatly ruined, but has been somewhat wider, and is socketed both for a vertical and a transverse bar, similar in section to that in the first window. The socket for the vertical bar still exhibits a trace of rusty iron. Neither window has been glazed or shuttered. The door between them is 3 feet 10½ inches

wide, with splayed and checked jambs carefully wrought in freestone. The ceiling of these cellarage apartments, being the floor of the hall and kitchen in the second storey, was of wood, resting on a rough corbel-course of projecting stones of which a small length remains, at a height of 6 feet above the threshold stones of the doors, just south of the partition wall. This corbel-course has extended uninterruptedly across the partition, and is exposed by the falling away of the latter—another proof that the partition has been an insertion. The hall had been about 60 feet in greatest length, along the east face. Its "screens," or lower end, would be to the north, adjoining the kitchen, with the dais at the opposite end, in close communication with the solar, or lord's private rooms, which, as suggested already, would no doubt occupy the missing south-western tower. It is not clear how access was gained to the hall and kitchen, but perhaps wooden stairs were provided for the purpose.

Masonry and Detail.—In the masonry of this castle there is to be marked a curious and striking contrast between the rudeness of the rubble walling and the very great care and refinement everywhere bestowed upon the dressed work. The masonry of the curtain-walls and towers, and of the early addition in connection with the donjon, has already been described. Among the boulders the red granite upon which the castle is built predominates, but many other kinds of rock, obtained no doubt as "heathen" stones, are found; indeed the walls of this castle are a perfect petrological museum, exhibiting a rich variety of colour and differential weathering. In particular there are massive, sharply cut fragments of a dense, blue, closely foliated schistose rock, very large ice-carried boulders of which remain *in situ* on the slopes south of the castle. A close inspection of these boulders, made for me by Mr Bisset, showed distinct traces of their having been operated upon. The masonry of the courtyard wall and partition of the domestic range is coursed rubble not dissimilar to that of the curtains, but smaller stones have been selected and there is greater use of pinnings, which are still more freely employed in the jambs of the inserted door and in the refaced interior of the north curtain.

All the dressed work is in freestone, apparently from Kildrummy, very carefully cut and closely worked over with a small pick-like tool, such as the one which was recovered during the excavation of Kirkeudbright Castle¹ (fig. 17). The style of treatment is similar, and little inferior, to that of the dressed work at Kildrummy Castle. It seems very characteristic of the thirteenth century. In the course of excavation were recovered a large number of moulded fragments. Particularly remark-

¹ See *Proceedings*, vol. xlviii, p. 394.

able are the very fine voussoirs of an arch, with splendid dog-tooth enrichment, shown in fig. 18. The carving of these fragments, which were found in the domestic range, is as masterly as the finest First



Fig. 17. Iron Pick, 6 inches long, from Kirkcudbright Castle.

Pointed work in any church. Scarcely less vigorous is the fine string-course of early thirteenth-century profile, also from the domestic range, shown in fig. 11. At the gatehouse were found the sill and two jamb-



[Photo W. Norrie.]

Fig. 18. Coull Castle: Voussoirs with Dog-tooth Mouldings, found in Domestic Range.

stones of a loophole (see fig. 11), 6 inches in daylight width, with a broad inner bay, narrow chamfered edges externally, and wrought on the sill a downward, steeply raked, fan-tailed splay. No doubt the gatehouse towers would be well equipped with such loopholes, arranged so as to cover the bridge and portal and rake the adjoining curtains. But the most

remarkable stone obtained in the excavations was one from the domestic range, inscribed apparently with the Gothic letters M.S. (fig. 19).

A number of mason's marks occur on the dressed stone-work, and are illustrated in fig. 11.

At Loch Coull, along with the dog-toothed voussoirs, inscribed stone, and other carved fragments, is preserved a trough in coarse granite, the basin measuring 1 foot 5 inches long, 1 foot broad, and 6 inches deep, which is said to have come from the castle.

As a result of a full consideration of all the facts as set forth in the preceding paragraphs, I am of opinion that the outline of the castle has now been uncovered about as far as it is still preserved. It will be noted that, supplying the missing gatehouse tower and the tower at the south-west

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Fig. 19. Coull Castle:
Inscribed Stone.

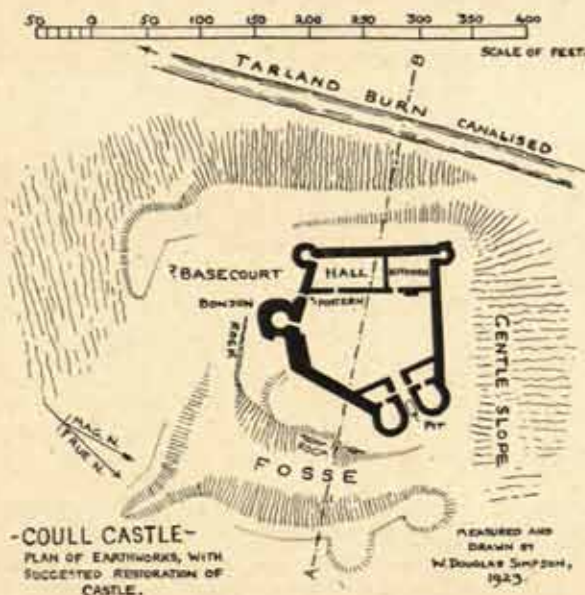


Fig. 20. Coull Castle: Plan of Earthworks.

angle—both of which, we may feel certain, once existed in their respective places—the five towers mentioned in the old *Statistical Account* have been recovered. In fig. 20 an attempt has been made to restore the original plan. A noteworthy feature of this castle is the comparative thinness of the tower walls compared with the massy curtains. This

feature is visible also at the Castles of Tibbers, Moulin, and Lochindorb, and in the gatehouse at Bothwell Castle (see plan, fig. 14). Being the seat of active, not passive defence, an angle-tower relied less on mere solidity than did the inert curtain which it flanked.

Outworks.—Like all the major fortresses of its time, the Castle of Coull was strongly guarded by outer defences of earthwork (fig. 20).

On the west side a natural protection was afforded by the steep, narrow valley of the Tarland Burn, which at present flows in its deepened channel about 40 feet below the base of the west curtain. Doubtless its ancient bed is represented by an upper terrace at a depth of some 25 feet below the curtain (see section, fig. 11). On the north side of the castle this terrace swings round into a fairly gradual slope which extends away towards the church. On the south side the valley of the burn curves round to the east at a distance from the castle (see map, fig. 1), leaving outside its south wall an open space, more or less level, measuring about 125 feet in breadth. There are indications that this area has been used as a base-court. On the west and south sides, which overhang the burn, it is enclosed with a broad bank, which would doubtless carry a stout *jarola* or palisade. Access to this base-court was obtained from the postern in the south curtain. Such an outwork would be very useful for sheltering live stock in time of blockade.¹ On the east side, where the castle faces the higher slopes descending from Mortlich, it is defended by a formidable ditch hewn in the living rock. This ditch (fig. 21) averages 80 feet in breadth and 30 feet in present depth—approximating closely, that is, to the dimensions of the ditch at the contemporary and neighbouring Castle of Kildrummy. Pits sunk near its northern and southern ends revealed bed-rock at a depth of 4 feet 3 inches and 2 feet 7 inches respectively. At its northern end, the ditch seems to have run out upon the slope falling from the castle towards the church. At its southern end, a spur about 30 feet wide and 56 feet in length is sent off towards the south-east, evidently with the intention of enclosing the east and south sides of the base-court, but the work has never been completed. The inner face of the ditch, which is largely precipitous or shelving rock, is carried as a rocky ledge 2 or 3 feet high round the south front of the castle to a point abreast the donjon. Along the east front the ditch has been kept at a distance varying from 30 to 45 feet out from the curtain-wall. On this front the counterscarp is crested by a low mound about 10 feet in breadth, and towards the north end are two conical mounds, of which the southern

¹ Mr Bisset informs me that in his opinion this base-court has been ploughed. "It shows a certain kind of grass which favours man-disturbed land, and there is all round that typical ridge which marks the gap between the first furrow and the unploughed margin."

measures about 36 feet from east to west and 25 feet from north to south, while the northern measures about 16 feet by 35 feet in the same directions. Whether these earthworks on the counterscarp have a defensive significance, or whether they merely represent surface upcast from the ditch, or even rubbish-heaps of more modern date, it is impossible to say. There is no evidence that the ditch was ever wet. Certainly the loose, friable, accumulated earth dug out of the pits sunk to find the original rock-bottom in no way resembled silt.

Present Condition.—The present state of the exposed buildings is very unsatisfactory. All the walls uncovered in the earlier excavations are crumbling rapidly, and great portions have already fallen. Their



[Photo W. Norrie.]

Fig. 21. Coull Castle: Ditch, looking south. (The eminence in the rear is the Gallowhill.)

decay is chiefly due to the large amount of mortar in the hearting of the walls, which renders them specially liable to suffer from atmospheric agencies and growth of plants. The surface mortar is everywhere "dead," having lost all adhesive power, and in many cases is running down into sand. The wall-heads are in a bad condition, the stones being slack and the joints dirty. In most places the body of the walls seems sound enough. The dressings in Kildrummy freestone have stood exposure well, except for an occasional block built *en délit*, where decay has been very rapid. One such face-bedded stone, in the south jamb of the south door into the domestic range, has spalled away almost entirely. Weathering seems to have little affected the boulders of metamorphic rock in the walls, but the red granite is rather more liable to waste through the predominance of felspar in its composition.

An ancient and noble thorn tree (fig. 15), rooted in the west curtain

just at the junction of the partition in the domestic range, has greatly disturbed both these walls. Much damage is being done to the ruins by sheep.

To put these remains in order would be a very costly task. The surface joints would have to be raked thoroughly out in order to eliminate "dead" mortar, blown dirt, and vegetation; the facings should be tamped in cement, pointed up with lime, and made good where necessary in stone, the interiors re-grouted and the wall-heads weather-proofed.

Except for sporadic damage by sheep and rabbits, the condition of the earthworks is good.

As a temporary measure, all the heads of walling exposed by excavation have been covered carefully over with sods. Where excavation was carried below the foundations, these have been covered in again, in order to prevent damage by frost. For a similar reason the garderobe flue in the donjon has been closed above. All trenches not exposing structure were filled in and returfed, except the pit in the courtyard showing the ancient level, and the sections across the semicircular area on the east front, proving this to have been outside the building. The soil-slopes above the gatehouse pit have been blanketed with turf to prevent subsidence.

III. DESCRIPTION OF THE POTTERY AND OTHER RELICS.

Dr Marshall Mackenzie has placed in my hands an assortment of relics, a list of which follows, recovered by him during the earlier excavations. Unfortunately, no record is available as to where and under what associations these objects were found. For the purposes of the present survey, objects belonging to this collection will be catalogued under the reference letter M:—

42 shards of pottery; 1 piece of glass; 2 iron mountings or bars for strengthening a door; iron pin with eyehole; hinge-pivot; key; pair of smith's tongs; 3 fragments of an iron pot; mounting with movable handle or hook; iron rod; 2 nails; 4 pieces of lead; piece of slag; 2 oyster-shells, deer-horn, and bones.

Outside the donjon, in the angle between it and the east curtain, an extensive midden deposit was discovered, consisting of fine, loose, dark earth highly charged with relics. It took the form of a talus about 6 feet deep, blanketing the base of the tower and curtain, and thinning out towards the ditch. This deposit was cleared out down to the *solum*, and as far back from the walls as time allowed, and the contents carefully riddled through a $\frac{1}{2}$ -inch mesh. A remarkable thing about this

midden was the complete absence of charcoal. From it the following objects (hereafter referred to under reference letter A) were recovered:—

51 shards of pottery; 21 nails; hunting or flaying knife, with wooden handle; domestic knife; part of a small hinge; fragment of hollow iron rod; bung in deer-horn; portion of deer-horn cut with knife; part of a wooden board; small branch or twig; oyster-shell and bones.

A second and smaller midden deposit was found along the outside of the north-west tower, and its contents secured by riddling. The relics, catalogued below, are referred to under the letter B:—

9 shards of pottery; 6 nails; 1 piece of deer-horn; bones and charcoal.

A third deposit, also apparently a midden, was unearthed among the obscure foundations immediately south of the gatehouse. The relics (referred to hereafter under the letter C) are as follows:—

1 shard of pottery; 51 nails; mass of slag; bones and charcoal.

From the gatehouse were recovered the following (reference letter D):—

7 shards of pottery; 7 fragments thick green glass; 7 fragments thick blue glass; 2 fragments thin blue glass; half a sling-ball in freestone; 122 nails; hollow or reeded nail, fused on to stone; bleb of iron fused on to gate-tower; hinge-pivot; 35 indeterminate small fragments of rusted iron; charcoal; masses of slag and fused matter; piece of bark.

In the pit were found the following (reference letters D P):—

Fragment of hinge-pivot; iron ferrule; 31 nails; arrow-head; 3 indeterminate rusted iron fragments; charcoal of large wood; charcoal of brushwood; unburnt twig; oyster-shell and bones.

Under the reference letter E are grouped the following miscellaneous "finds":—

8 nails, piece of horn, charcoal, all from inside of west curtain, in kitchen; 16 shards of pottery, from various places; iron tang, found by Mr Robert F. M. Watson, M.A., Schoolhouse, Coull, between two jamb-stones of south door into domestic range.

Pottery.—Among all this miscellaneous assortment of relics the greatest interest attaches to the pottery (fig. 22), from the evidences of chronological horizon which its characteristics afford. The study of mediæval pottery is a vast subject, in which an enormous amount of research still waits to be done, particularly in Scotland, before a completely scientific chronological classification can be formulated. None the less, it has already been possible to assign certain well-known types to specific periods; and a general survey of the shards from Coull Castle admits of important correlations with previous discoveries of mediæval pottery under associated circumstances that leave us in little doubt as to the chronological horizon indicated.

Of the 126 potsherds found, all except 34 exhibit glaze in good preservation or show signs, more or less distinct, of having been glazed originally; but it would be rash to assert that among these 34 shards some may not once have been glazed. As usual in mediæval

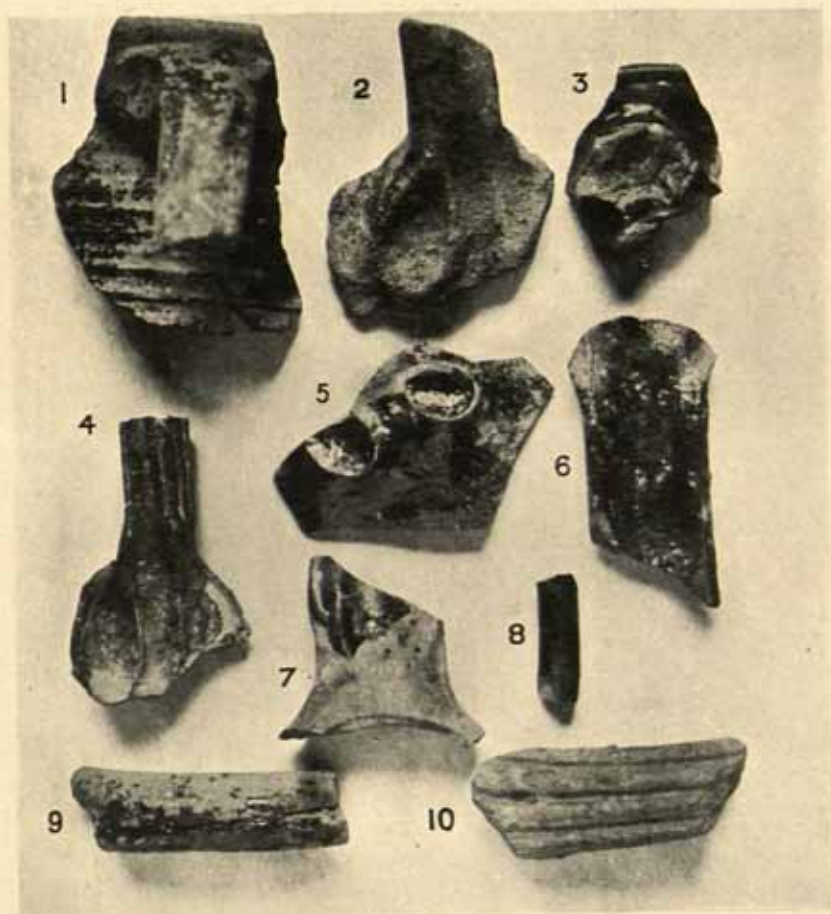


Fig. 22. Coull Castle : Pottery found during Excavations.

ware, the glazed fragments are treated with a lead glaze, the colouring—which ranges through all shades between deep bluish-green to bright yellow—having been obtained by the admixture of oxides of copper. In some of the fragments it would appear that the lead glaze had been applied without such admixture, its effect then being simply to deepen the natural colour of the ware, a shard of dirty-white clay thus producing a yellowish glaze.

The most complete fragment of a vessel is the segment of the neck of a large pitcher with part of one handle, A 1 (fig. 22, No. 1). The internal diameter of the mouth of this vessel had been 68 mm., and the thickness of its walls varies from 3 mm. to 6 mm. Its brim, thickened to 12 mm., is rounded and flattish on top, and slightly everted. The neck is ornamented by a series of horizontal, faintly raised ridges. At the base of the neck is a rib of bolder profile, below which a portion of the swelling body of the vessel is preserved. In the interior of the neck a pronounced hollow or incurved area is formed by the thinning off of the wall below the rim, and the surface is marked by faint horizontal striations produced by the potter's finger applied to the revolving vessel. The handle is somewhat oval in section, being about 26 mm. in greatest thickness (horizontally), where it breaks off. Near its attachment to the neck it broadens, and is fixed on immediately below the brim, two broad, deepish, leaf-shaped depressions being formed by the thumb drawing down the clay at either side. Rounded below, the handle is slightly ribbed on the upper surface. It has curved somewhat rapidly round from its upper attachment, near the brim, to its lower attachment, now lost, on the swelling body of the pitcher. This vessel is formed in a finely textured, light red ware, and is coated over the whole of its exterior with a reddish glaze.

Several other portions of handles belonging to similar vessels were found. M 1 (fig. 22, No. 4) is the fragment of a handle about 22 mm. in diameter, ornamented with closely set ribs of semicircular profile which run lengthwise along the handle, producing a pleasing fluted effect. It is still attached at its lower extremity to a small part of the body of a large pitcher, and the way in which the handle is fixed on shows that this vessel must have been of a cylindrical or oviform rather than a globular shape. At the junction of the handle are leaf-shaped depressions of the usual type but somewhat shallow. The wall of the vessel has been about 5 mm. thick. It is formed in a pale red ware of fine texture, coated with a deep blue-green glaze. The interior is unglazed, and ornamented by the usual horizontal striations. A 2 (fig. 22, No. 2) is a fragment of a handle ribbed or fluted on the upper surface only, with its lower attachment to the vessel. It is similar in most respects to that previously described, but is larger (diameter, 26 mm.), and is made of a much coarser, gritty, ill-levigated dark grey ware from which the brown exterior glaze has almost perished. The basal thumb-marks in this specimen are very large and deep. The interior surface of the vessel, which seems to have been unglazed, is marked, instead of the usual horizontal striations, by a series of rather deep vertical hollows impressed by the finger. Here again the form of pitcher indicated by the profile of the fragment is

cylindrical, not globular. M 11 (fig. 22, No. 10) is part of a large handle of elliptical section, 31 mm. in greatest (horizontal) diameter, thickening to the attachment, which is lost, and ribbed on the upper surface only. It is made of a fine-textured ware, almost brick-red, and in its present state exhibits no trace of glaze. M 10 (fig. 22, No. 9) is a somewhat similar handle, smaller, circular in section, with a diameter at the thinner end of 22 mm., ribbed all round but more closely on the upper surface, on which it is pierced by a series of small puncturings irregularly dispersed. It is made of a fine light red ware with a brownish glaze.

A different type of handle is shown by the two fragments M 3 and M 4 (fig. 22, Nos. 6, 7), evidently from the same vessel. It is formed of a flat strip of clay, 40 mm. broad and 9 mm. thick, bent into a slightly curved section and rounded off at the edges. The concave surface has formed the upper side of the handle, which has been covered with a rich dark green glaze. A series of deep, irregular punctulations occurs on the upper surface of the handle at intervals of about 25 mm. One of these fragments (M 4) shows the commencement of the basal attachment, with part of two thumb-marks. The material is a fine light red clay. M 2 (fig. 22, No. 5) is obviously part of the wall of the same or a very similar vessel, exhibiting the bases of two closely set leaf-shaped depressions or thumb-marks below the attachment of a handle. The form is that of a cylindrical pitcher. The ware is light red, finely textured, 4 mm. thick, with a deep green glaze, very lustrous. The interior is unglazed, and instead of the usual regular striations appears to have been smeared over carefully with the finger before firing.

B 1 (fig. 22, No. 3) is a small part of a pitcher showing the brim and the affixment of a handle (which has gone), with parts of the usual lateral thumb-marks. Along the exterior lip of the slightly everted rim is an upraised fillet. The fragment is in pale red ware, very finely textured, glazed on the exterior with a moss-green tint. Along the top of the brim is a dark green line. M 5 and M 9 seem to be portions of the same vessel, a ewer in dirty-white ware with a deep blue-green, highly lustrous glaze. M 5 is part of the rim with a small portion of the channel of a spout opening level with the rim. M 9 (fig. 22, No. 8) is a small portion of a handle, oval in section, 14 mm. in greatest diameter, in the same ware and glaze. M 8 is part of the brim of a large vessel, coated on the exterior with a cinnamon-brown glaze which extends over the lip and a little down the interior wall. Along the top of the brim runs a darker band, and there are indications of patterning in a darker hue on the face. The material is a finely grained, pale red clay, striated on the inner face. A similar ware, rather paler in the body, but with the same cinnamon-

brown glaze veined with darker bands, is represented by the shard M 13. A 18 is a small shard also of similar ware and veined glaze, exhibiting a vertical band of darker colour 7 mm. broad.

B 2 is a shard of a different type, in dirty-white ware, with vertical interior face, sharp inner lip, flat-topped brim, and an external chamfered lip uniting with the face below by a graceful incurve. The wall of the vessel is 3 mm. thick, and the greatest thickness of the brim is 9 mm. The exterior has been treated with an uncoloured glaze, below which is pigmented ornamentation consisting of a thin dark blue band immediately under the brim, and at 7 mm. below it another band forming the upper border of a zone of chevroned ornament in brown and yellow. Mr Alexander O. Curle, F.S.A., F.S.A.Scot., has called my attention to a small shard of similar coloured ware found at Kirkcudbright Castle. A vessel similarly coloured and ascribed to the thirteenth or fourteenth century is figured in the Catalogue of the Collection of London Antiquities, Guildhall Museum, Plate lxvi., No. 11, and p. 177.

M 32 and M 33 are buff-coloured shards, the former apparently unglazed, and the latter showing slight traces of a deep green glaze. Both have belonged to tall cylindrical vessels with walls about 5 mm. thick. The walls have inclined somewhat towards the base, which has been slightly convex. To steady the vessel, struts have been formed at intervals by drawing down the clay of the side wall between finger and thumb, leaving a perfectly preserved thumb-print in the soft material.¹ M 28 exhibits a similar strut; but, the vessel being more globular in shape, the strut is drawn out from the base instead of down from the side wall. Instead of the usual strut formed by pinching between finger and thumb, A 17 has a little foot carefully wrought in the clay. M 27, M 34, and E 6 are portions of shallow vessels with flat bases showing no signs of struts. In A 15 we have a fragment of the base of a large vessel in coarse dark greyish-red ware. The base is flat, and along its edge a sort of rough attempt at ornament has been made by a series of thumb impressions set about 10 mm. apart, the clay not being drawn downwards into a strut.

M 6 is part of the side of a tall cylindrical vessel in buff-coloured ware, coated externally with a deep, highly lustrous green glaze. It displays narrow vertical ribs set about 15 mm. apart, but diverging somewhat from one end. Between these bands occur vertical rows of rough leaf-shaped processes of clay set closely together, and worked up from the surface but not applied to it. A 5 is a portion of a massively built vessel in buff ware, with a light yellow glaze on the interior, which is smooth,

¹ These thumb-prints were submitted for examination to Mr W. Clark Souter, M.D., D.O., Aberdeen, who reports that it is impossible to infer from them as to the sex of the potter.

and a more greenish mottled glaze on the exterior, which is boldly ribbed or cordoned. M 14, a fragment of pale red ware with a deep green external glaze, has been ornamented with vertical fillets of flattish form, 3 mm. broad and set 11 mm. apart. A 4, in brick-red ware, is ornamented with shallow ribs about 3 mm. broad and set closely together, and is covered with a rich dark green glaze, which appears blue in the hollow spaces and lighter on the ribs. The walls of this handsome vessel are 4 mm. thick.

Two fragments (A 7 and A 9) of a rather thin dark grey coarse ware, with a dirty-green external glaze and a blackish incrustation on the interior, show for ornament a horizontal ridge which has been toothed by rough strokes drawn across it with a thin, sharp instrument. There are a large number of shards of buff ware finely textured, smeared smooth on the inside and smooth or faintly ribbed on the exterior, with a pale brown or dark yellow glaze. These shards are usually about 5 mm. thick, and some of them have evidently belonged to large vessels. Two shards (M 12 and E 9) of a hard, finely textured, brick-coloured body, 4 mm. thick, smoothly striated on the inside, are coated on the outside with a very lustrous brown-black glaze (?oxide of iron), resembling Cistercian ware; similar pottery was discovered at the Kildrummy Castle excavations in 1919. There are also portions of the dark, coarse and gritty, nondescript vessels used for cooking purposes, blackened with fire.

Viewing this pottery from Coull Castle in all its characteristics, little difficulty will be found in assigning to it an approximate chronological horizon. The cylindrical or bag-shaped form of pitcher indicated by some of the shards presumes a date not later than *circa* 1400, after which time the pitchers tended to become more globular in form.¹ The handles having leaf-shaped depressions at their junctions with the vessel are characteristic of the fourteenth century, as are also the convex bases having struts formed by drawing the clay of the side walls down betwixt finger and thumb. It has been found that these basal struts become more numerous in proportion to the lateness of the vessel. A green-glazed pitcher in the British Museum, assigned to the early fourteenth century,² has a continuous series of such struts forming a crinkled base-rim all round the vessel. The Coull pottery shows an earlier stage of development, having basal struts only at intervals round the rim. Making allowance for the fact that the sequence of styles was doubtless somewhat

¹ It must not, however, be assumed that every globular pitcher is necessarily late. In the British Museum is a vessel of markedly oviform body, ornamented with a hunting scene in relief, the figures of which are late twelfth or early thirteenth century in character. See R. L. Hobson, "Medieval Pottery found in England," *Archaeological Journal*, vol. lix. p. 5 and fig. 1.

² British Museum, *Guide to the English Pottery and Porcelain in the Department of Ceramics and Ethnography*, 3rd edition, 1923, p. 6 and fig. 5.

later in Scotland than in England, it is scarcely possible to assign the Coull pottery to a date later than, if as late as, the period ascribed to the British Museum vessel mentioned—that is, in the early years of the fourteenth century. This inference is confirmed otherwise by the fragment of a base (A 15) having thumb impressions not drawn down into a strut, which is an earlier stage of the same *motif*. Bases with intermittent struts were found in the excavation of Kirkcudbright Castle, a thirteenth-century castle destroyed in the Wars of Independence, from which also were recovered fluted or reeded handles with deep leaf-shaped depressions at the junction with the vessel, very similar in character to those found at Coull.¹ Punctured and notched ornament made with a pointed stick, such as occurs on several of the Coull shards (M 10, M 3, M 4, A 7, A 9), is also characteristic of the thirteenth and early fourteenth centuries. The pottery found at another early stronghold in Aberdeenshire, Dundarg Castle,² which stood a famous siege in 1334, included fragments with similar ornament, fluted handles having leaf-shaped depressions uniting with the neck of the pitcher just below the rim, and slightly convex bases with intermittent struts in groups of three; all not dissimilar to the corresponding forms from Coull. The bases from Dundarg, however, seem to belong to a slightly more advanced type. The thinness of the ware from Coull is also an early characteristic. Ornamentation formed by leaf-shaped processes of clay, such as found on the shard M 6, and the broad type of handle with a shallow longitudinal groove, indicated by the fragments M 3 and M 4, are both paralleled in the pottery of the thirteenth or early fourteenth century recovered from a moated mound at Kidsneuk, Ayrshire.³ Other instances of this type of handle occur in a pitcher, now in the National Museum of Antiquities, found at Kinghorn, containing coins of Robert I., Edward I. and II., and in a fine three-handled pitcher (fig. 23) from Glasgow, in the same collection, and assigned to the late thirteenth or early fourteenth century. The handles of this pitcher are almost identical with the corresponding handles from Coull.



Fig. 23. Pitcher from Glasgow.

¹ See *Proceedings*, vol. xlviii. pp. 300-4.

² *Ibid.*, pp. 100-1.

³ *Ibid.*, vol. lii. pp. 60-70.

On the whole, therefore, having all these facts in view, it seems likely that the pottery from Coull Castle must be assigned to a date not later than the opening years of the fourteenth century; the period suggested both by correlations with other pottery ascribed to about this date, and also by inferences drawn from the stage of development indicated by the ware itself.

Ironwork.—The most interesting piece of ironwork found was the smith's tongs (M 60), 34 cm. long, in good preservation save for about two-thirds of one handle which are wanting. M 59, a straight rod of iron 22½ cm. long, with a slight knob at one end, may be the missing handle, but the other one is curved. M 56, M 57, and M 58 are fragments of a cast-iron pot, with sides 2 mm. thick. When pieced together they indicate a vessel of about 25 cm. in greatest diameter. The surface has been ornamented by two horizontal fillets about 25 mm. apart. M 63 may be attachment of a handle to this vessel. It consists of a hook with a knob at the upper end inserted in a hole provided in a strip of iron 23 mm. broad, which in its present fragmentary state is about 10 cm. long and sharply incurved. M 44 and M 46 seem to be bars for strengthening a wooden door: the former, which is nearly 35 cm. long, 33 mm. broad, and 6 mm. thick, is slightly expanded, hollowed, and pointed into a tongue-like form at one end; while the latter, about 45 cm. long, 39 mm. broad, and 10 mm. thick, is flat on the inside, slightly rounded outside, and furnished at either end with a stout spike, about 55 mm. long, for attaching it to the wooden framework. M 48 and D 18 are hinge-pivots, 177 mm. and 84 mm. in length respectively, the latter, which was found near the gate pit, being encrusted with the charcoal amid which it lay embedded. D P 4 is a fragment of another hinge-pivot also from the pit, and A 49 is a wasted remnant of a hinge of small size. M 47 is a large pointed pin, 26 cm. long, 3 cm. broad at the head, and about 14 mm. thick. The head is pierced by an eye roughly oval in shape, 3 cm. long and 13 mm. in greatest width. M 45, which is about 16 cm. long, seems to be a sort of key for raising a hasp.

In A 48 (fig. 24, No. 2) we have an interesting knife of graceful shape. The one-edged blade is 9 cm. long, 17 mm. in greatest breadth, and 6 mm. in greatest thickness. The handle is of wood much wasted, and 47 mm. in length. This would apparently have been a flaying knife. A 50 is a portion of a slender blade of more domestic use.

D P 5 (fig. 24, No. 3) is a barbed arrow-head, 52 mm. long, with the point bent back as if by impact, and still retaining part of the wooden shaft in the socket. D P 6 (fig. 24, No. 4) is an iron ferrule, 48 mm. long, preserving in the socket a fragment of wood. A 50 (fig. 24, No. 1), a pointed iron implement 117 mm. long, is hollow at the broader end. Of the 241 nails

found in the course of the excavations, it is unnecessary to say more than that they vary in length from 44 mm. to 116 mm., that they are all four-sided in section, and that two types of head are shown, one quadrilateral and hammer-shaped, and the other flat and circular, measuring sometimes as much as 25 mm. in diameter.

Leadwork.—Two crumpled fragments of roofing lead (M 49 and M 50) were found, 2.5 mm. thick, and covered with a whitish incrustation; also a piece of lead (M 52) in the form of a roughly oval strip, varying

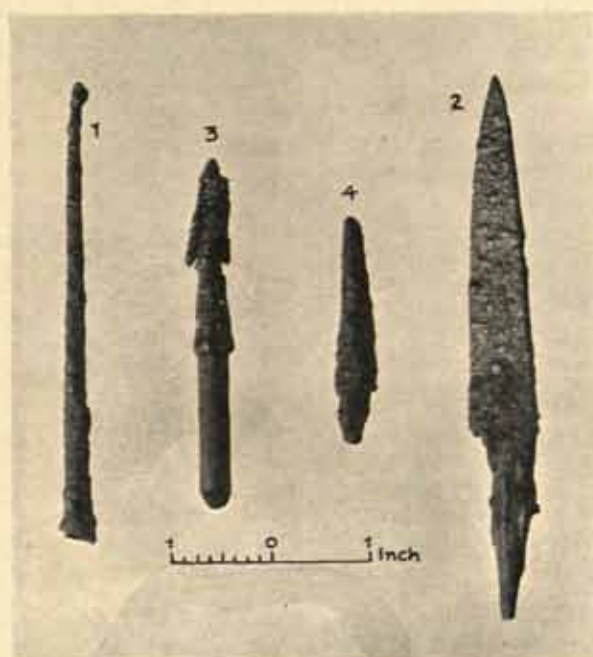


Fig. 24. Coull Castle: Iron Objects found during Excavations.

from 7 to 16 mm. broad, about 4 mm. thick, and 45 mm. in greatest interior diameter, which had been cut with a knife out of a single mass. M 51 is a mass of melted lead, caught up in which are wood shavings.

Glass.—Seven fragments found within a foot of the surface, when pieced together, restored the base and a considerable portion of the side of a bottle (D 19), of modern type. Two pieces of thin glass of a pale blue hue, belonging to a vessel (D 20) about 40 mm. in diameter with walls 2 mm. thick, found outside the gatehouse tower, may perhaps be of greater antiquity. There were also found seven fragments (D 9-15) of a large bottle in olive-green glass 6 mm. thick, having a deep "kick-

up" in the base, which has been about 95 mm. in diameter. From the base, the sides of the bottle have risen with a graceful inward curve not unlike that of a common form of modern flower vase. A fragment of the neck of the bottle indicates an external diameter of about 36 mm. The surface of this glass is much wasted and iridescent. It belongs to a common type of eighteenth-century bottle. The fragment of white glass M 42, showing a radial pattern on base, is obviously modern.

Horn.—A 42 is a stopper or bung in deer-horn, cut with a knife out of a tine. It is 18 mm. in diameter at the greater end, 15 mm. at the smaller end, and 17 mm. long. A 47 is a portion of deer-horn, oval in section, 34 mm. in greatest diameter, and about 44 mm. long. One end exhibits a smooth-cut surface; the other end, which is much broken and marked by knife-cuts, has been wrought into a toothed or notched shape.

Wood.—A 43 is a portion, 146 mm. long, of a piece of pine-wood 40 mm. broad, 13 mm. thick on one edge and 8 mm. thick on the other. One end is cut square, the other broken off.¹

Stone.—D 8 is half a sling-ball in freestone, 66 mm. in diameter.

Miscellaneous.—Encrusted on to the battered base of the donjon immediately below the vent from the garderobe was a mass of hard brown excremental matter in a quasi-fossilised condition, much commingled with *débris* and lime. By direction of my friend Professor James Hendrick, B.Sc., F.I.C., of the Chair of Agriculture, Aberdeen University, Mr George Newlands, M.A., B.Sc., A.I.C., of the Research Department, North of Scotland College of Agriculture, has been good enough to furnish the following chemical report:—

"The material examined is a soft, friable, concretionary deposit with open structure. The walls of the cavities are coated with yellow-coloured skin, but the fractured material has a pinkish buff colour. On application of acid there is free effervescence, indicating the presence of calcium carbonate. The residue, insoluble in the acid, constitutes the bulk of the material, and consists of granitic fragments and minerals derived from granite, namely pink felspar, quartz, and partially weathered biotite of a golden-brown colour. Phosphate was tested for and found to be present in abundance."

Mr Newlands has also kindly supplied the following report upon the fused stony matter found at the gatehouse:—

"The material examined consists mainly of granitic fragments of various sizes, composed of quartz, white felspar, and black mica. Many of the fragments have fused glassy surfaces and rounded edges, while some have assumed a globular shape. Some portions are quite porous and frothy in structure, having the appearance of a slag or of a vesicular lava. In some cases fragments

¹ Among wooden relics from Coull Castle may be noted a table in dark oak, said to have been made "from the wood of the sluices of Coull Castle," now in the possession of Mr R. Milne, Aboyne.

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of smaller sizes occur, filling up the spaces between larger angular pieces, thereby suggesting a binding material. On being tested with acid the infilling material effervesced. Some of the pieces are of black iron-like appearance, but are too light in weight to contain much iron, and on examination with the petrological microscope were found to be siliceous rock material in a thoroughly fused condition."

On the suggestion of Professor Hendrick, a sample of the soil from midden A was submitted to Mr Newlands for examination, with the following result:—

"The material examined was earth-like in appearance and consisted mainly of granitic *débris*. It differed, however, from an ordinary granitic soil in having a considerable amount of carbonate present, and in containing much more phosphatic material than such a soil. About 4 per cent. by weight of the dried material was organic matter, this being roughly estimated by finding the loss in weight after igniting and recarbonating the previously dried material."

Mr Macgregor Skene, D.Sc., of the Botany Department, Aberdeen University, assisted by Miss Dorothy G. Downie, B.Sc., B.Sc. (For.), has been good enough to supply the following report upon the vegetable remains:—

"*Unburnt Wood*.—D P. 3, twig of *Pinus sylvestris*, the Scots pine. A 43 (fragment of board), the same. A 44, twig of hawthorn. D 16, bark of Scots pine.

"*Charcoal*.—Oak abundant in all examples; and in addition, *probably* hazel from kitchen (catalogued under reference E), and in brushwood from pit (abundant in both); one piece of willow from pit; one piece of what seems to be a very slow grown elm from midden C."

To Mr Robert M. Neill, M.C., M.A., F.R.M.S., of the Natural History Department, Aberdeen University, I am indebted for the following report on the bones, large quantities of which were recovered in the course of the excavations.

"Bone remains were found at eight spots within the precincts of the castle site. They consist in the main of bones of oxen, red deer, pig, and sheep. All the bones appear to be of approximately the same age, and to be the refuse from the cooking-pot. Most of them have been broken across into short fragments. Some pieces of long bones show splitting for marrow. A number show hacks and cuts made by a heavy instrument.

"Charred or calcined bones were uncommon. Odd fragments of calcined bone occurred here and there, but only in one spot (gatehouse pit) was a *cache* (about four handfuls) of calcined bones of ox found.

"As a typical example of a *cache*, that from the north-west tower midden-deposit might be taken. It contained the following:—

"Ox, *Bos taurus* (Linn.); twenty-seven fragments of hind-limb and rib bones, long bones split, many bones fractured by blunt instrument; two small fragments of vertebrae, one being part of atlas vertebra; one terminal phalange of foot.

"Red deer, *Cervus elaphus* (Linn.); thirty-four pieces of leg and rib bones from 1 to 4 inches long, many split; two small fragments of pelvis, 1½ inch and 2 inches in length; a single terminal phalange of foot.

"Sheep, *Ovis sp.*; piece of scapula; eight fragments of rib bones.

"Pig, *Sus scrofa* (Linn.); two bones of foot; molar tooth; piece of boar's tusk.

"Roe deer, *Capreolus capreolus* (Linn.); two terminal phalanges of foot.

"Rabbit, *Lepus (oryctolagus) cuniculus*; five leg-bones and odd ribs.

"Pigeon, *Columba sp.*; leg-bone and sacral region.

"Miscellaneous: a *centrum* of a teleostean fish vertebra, from its size possibly a salmon of 8-10 lb.; *os calcis* of a small horse; fragment of a sheep vertebra shorn clean through by a swinging cut and showing a perfectly even-cut face.

"The ox bones indicated animals of varying size but smaller than recent oxen. No skulls or horns were found. It is to be hoped that the further excavations contemplated without the castle may result in the discovery of the skulls, so that an accurate identification of the particular breed may be made.

"In addition to bones of adult wild boar, pig bones of a smaller size may indicate a domestic breed.

"Rabbit remains were numerous, but as the castle site is at the present day swarming with rabbits, it is difficult to determine just how far they belong to the bone deposits under discussion. Undoubtedly many are of recent date.

"An interesting fact emerging from a survey of the bones generally is that they are nearly all remains of 'quarters' and 'ribs' of beef, venison, etc. Two fragments of red deer horn represent the only pieces of skulls of any kind found (except rabbit). Vertebrae are very few, and chiefly from the hinder lumbar region; no cervical or thoracic vertebrae occur at all. This suggests that the slaughtering and dressing of the animals was done without the castle, and only certain well-defined parts, those most highly esteemed for food, were brought in to be hacked up for the pot. It will be interesting to see how far this may be confirmed during further excavations.

"Of remains of invertebrate animals only a few oyster shells were found."

It is a pleasure to add that the entire collection of relics from these excavations has been presented by Dr Marshall Mackenzie to the Anthropological Museum, Marischal College, University of Aberdeen.

IV. CONCLUSIONS.

The cardinal problem arising out of these excavations is of course in reference to the final fate of the castle. That its end was sudden and violent there is no room to doubt. The evidences of catastrophe at the gatehouse—the charred woodwork and twisted nails in and around the pit, the fused stone and other tell-tale witnesses to a conflagration—would in themselves be decisive on this point; but they by no means stand alone. In all quarters of the building charcoal was frequent, even in places quite impossible for midden deposits—for example, in the interiors of the towers. The courtyard has not yet been cleared, but the scree-slope of the excavation made to expose the domestic range everywhere yields charred matter if raked down with a walking-stick.

Nor do the evidences of destruction rest here. I am convinced that they may be seen also in the solid framework of the building itself. It will be noted that the two angle-towers flanking the north curtain are mere fragments of wall. Half the north-west tower has been clean destroyed right to the foundations, while of the north-east or gatehouse tower only a small segment remains. Its companion tower, which we can hardly doubt must have flanked the opposite side of the entry, has disappeared entirely. So also has the south-west angle-tower. On either side of it, west and south, the curtain-walls have been removed right down to the foundations. At the point where it reaches the highest level, the enormously strong east curtain has suffered a similar fate.

Great caution is clearly necessary on this matter, because we know that the ruins were being plundered at the close of the eighteenth century; and, if the old *Statistical Account* is really to be trusted in its statement that five towers were then exposed, it is evident that two must since have disappeared. But even making every allowance for such comparatively recent spoiling, it seems to me that distinct evidence still remains of deliberate demolition. The clean, abrupt vertical breaches straight across the east and south curtain, carried down in each case right to the foundations, do not in the least resemble the kind of destruction produced by the haphazard pulling to pieces of walls for lime or building material. And the same remark holds true of the angle-towers, as a glance at the illustrations (figs. 12 and 13) will show. Looking at the half of the north-west tower which still remains, it is difficult to resist the conviction that this tower has been deliberately placed *hors de combat* by the removal of a large segment of its circumference—like the treatment meted out to the donjon of Bothwell Castle by the Scots when they won it back from Edward III. in 1337. It is highly suggestive to recall that the circumference of the towers unearthed in the eighteenth century could not be measured "on account of their broken state" (see p. 54 above).

Two facts will forcibly impress themselves upon all who view the ruins in their present condition.

1. *The destruction has taken place precisely where such destruction would be, from a military view-point, most telling.* Effectively and economically to dismantle a fortress, the obvious course for a mediæval engineer was to make great breaches in the curtains and flanking towers; and this is just what seems to have been done at Coull. It is highly significant that the domestic range shows no trace of such breaching, and its condition to-day seems to be the natural result of gradual decay.

2. *The destruction has been greatest in places where spoliation of the*

walls for utilitarian purposes is least likely to have occurred. For example, the west curtain is removed to within a foot or two of its foundations, and in its southern portion even these have disappeared entirely. But this curtain, lying along the edge of the Tarland Burn, was of all parts of the castle the most unsuited to spoilers by reason of its inaccessibility. It is hardly possible to conceive how they could have selected for removal this curtain, and left untouched the wall of the domestic range, which fronts the open courtyard, and through or over which the materials of the curtain would have to be carted away. On the other hand, to a military engineer, anxious to dismantle the castle as thoroughly, as easily, and as speedily as possible, no course would be more natural than to throw this curtain over into the Tarland Burn.

On this matter the reader must form his own judgment. I can only place on record my personal strong conviction—which is shared by Dr Marshall Mackenzie and by others who watched the excavations—that the present ruinous condition of the castle is by no means wholly, or even mainly, due to modern spoliation, but that the indications are still legible of deliberate military dismantlement. In any case, the evidences of conflagration found in all parts of the building make it certain that the end of the castle was a violent one.

When did this catastrophe occur? Burning might have happened at any period; but, if the case for dismantlement be conceded, destruction on such a scale at once suggests the War of Independence.

It is well known that Bruce's policy was to "slight" a castle whenever he captured one, as his small field army was never sufficient to detach garrisons for these fortresses. As the *Chronicle of Lanercost* states, in describing how the Scots dealt with Roxburgh Castle, "they razed to the ground the whole of that beautiful castle, just as they did other castles which they succeeded in taking, lest the English should ever hereafter be able to lord it over the land through holding the castles."¹ In the case of the older type of fortress constructed of earth and timber, it would be sufficient to burn the wooden defences and the buildings within the enclosure; and that this was the usual procedure is proved by the fact that the earthworks of several castles of this early type, known to have been destroyed in the wars of the fourteenth century, such as Lochmaben and Dumfries, still survive in good preservation. But in the case of fortresses in stone and lime there is ample evidence, both literary and archæological, that destruction of the masonry was usually carried out on a very thorough scale, and that the frequent references in mediæval chroniclers to *prostrationes* and *fractiones* of castles were no empty phrases. On this point Barbour's language is

¹ *Chronicle of Lanercost*, trans. Sir Herbert Maxwell, p. 204.

emphatic again and again. Thus, after Sir James Douglas had captured his own "aventurus castell," we are told—

"That he all tumlit doune the wall
And distroit the hous all."¹

Of Forfar Castle Barbour writes:—

"And syne gert brek doune the wall
And fordid well and castell all."²

And after William Bunnock's daring ruse had won the Peel of Linlithgow, Bruce "gert down driff it to the ground."³ In the same way the King, after the fall of Roxburgh Castle, sends his brother Edward

"... to tummyll it doune
Bath tour, castell, and dungeoun
And he com with gret company
And gert travale so besaly
That tour and wall rycht to the ground
War tumlyt in ane litill stound."⁴

The fate of the two greatest castles in the kingdom, Edinburgh and Stirling, is described in very similar words:—

"And gert myne doune all halely,
Bath tour and wall richt to the ground."

"The castell and the towrys syne
Richt to the grund doune gert he myne."⁵

More generally, we are told how Sir Edward de Bruce, after over-running Galloway and Nithsdale, had

"... doun gyn doune the castellis all
Richt in the dik, bath tour and wall."⁶

In the case of Perth, similar treatment was inflicted on the fortified *enceinte* of a town:—

"And syne, the towris everilkane
And wallis gert he tummyll doune:
He levit nocht about that toune
Tour standand, stane, no wall,
That he na haly gert destroy all."⁷

That all this language is no exaggeration is clearly shown in those castles, such as Bothwell and Dirleton, where visible traces of extensive destruction have survived to our own time—without the element of perplexity induced at Coull by subsequent gradual decay or spoliation—

¹ Barbour's *Bruce*, ed. W. M. Mackenzie, p. 147.

⁴ *Ibid.*, p. 182.

² *Ibid.*, pp. 189, 245.

³ *Ibid.*, p. 156.

⁵ *Ibid.*, p. 190.

⁶ *Ibid.*, p. 176.

⁷ *Ibid.*, p. 160.

through the fragments of the dismantled building having been incorporated, just as they stood, in a later restoration.

With the supposition that Coull Castle was destroyed in the War of Independence, its recorded history, though meagre, seems to stand in full agreement; for there is no evidence, so far as I can find, of its having been inhabited subsequently to that period. True, the "Manor of Coull" is mentioned as the place of the head-court of the barony in the Learney Charter of 1377-84; but, even if it be conceded—what is highly doubtful—that "manor" can be equated with "castle," every student of mediæval documents is fully aware how frequently a castle is referred to as the capital message of a fief, and the place for rendering aids and services, long after we have positive evidence that the castle was deserted. This is particularly true, for example, in the case of the twelfth-century *mottes* or castles of earthwork and timber, whose mounds continued to be the *venue* of feudal courts generations after they had been abandoned for residential purposes. To quote one instance only, Dumfries Castle was destroyed as part of the conditions imposed by England upon David II. at his release in 1357; yet in 1369 we find Archibald the Grim, Earl of Douglas, bound by a charter to pay, for his lordship in Galloway, a white rose in blench ferme yearly at the Castle of Dumfries.¹

In the same way the mention of "the barony of Coull and O'Neill, with the fortalice thereof," in the Countess Isabella's resignation of 1389, may be simply (as occurs again and again) the repetition in legal phraseology of reference to a castle as one of the pertinents of a fief long after its residential character had ceased. That this is indeed the case is strongly hinted by the absence of any mention of the castle in the charters of Coull granted subsequently by Robert III. and Albany. The only decisive test would be reference to the castle as an inhabited place in the fourteenth and fifteenth centuries, or the existence of writs dated from it during that time. Of neither of these have I been able to find a trace. It seems hardly possible that, if a powerful castle like Coull had been in commission during these centuries, documentary evidence of its inhabitation would not have survived.

We have seen that Coull Castle during the War of Independence was held for England, by Sir John de Hastings and then by the Earl of Atholl. As Dr E. M. Barron has already suggested, its capture would have been an incident in Bruce's Aberdeenshire campaign of 1308, when all the places of strength garrisoned by English troops in these parts were recovered by the nationalists.² With such a conclusion the

¹ *Registrum Magni Sigilli*, 1306-1424, No. 329.

² *The Scottish War of Independence*, p. 331. By May 1309, we know that the only castle remaining to England in the north was Banff. See *Rotuli Scotiae*, vol. i. p. 63: "*De victualibus*

chronology of the pottery thus far recovered in the excavations seems to stand in perfect harmony.

Assuming therefore, as the result of the above inquiry, that Coull Castle was captured and dismantled by Bruce, or on Bruce's behalf, in 1308, we have still to account for the earlier dismantling and restoration evident in the donjon. In the total absence of all authentic record, such a task is entirely a matter of conjecture, but I think it is possible to reconstruct the fortunes of the castle during the war in a way that accords both with such indirect historical evidence as we possess, and also with the indications furnished by the building itself.

We know that at the end of the thirteenth century Coull Castle was held by Isabella, Countess of Fife, who adhered to the English side; and that in 1299 she made it over to the English knight, Sir John de Hastings. Whether the grant was immediately effective we have no means of ascertaining; but the supposition at any rate is that before the grant was made, in the earlier stages of the war, during the risings under Balliol (1296) and Wallace (1297), the castle would be held in the English interest by a constable or warden appointed by the Countess. Now from the draft conditions for a truce concluded between the Scots and English on 30th October 1300, where the places at that time held for England are catalogued, we glean the fact that in Scotland north of the Forth only Perth, Dundee, and Banff still sheltered English garrisons.¹ It may therefore be inferred that in the campaigns of Wallace the castle had been recovered from its English or pro-English masters.

In 1303 Edward I. invaded the North of Scotland, marching *via* Perth, Aberdeen, Banff, and Elgin to Kinloss and Lochindorb, which he made his headquarters for a number of weeks. The result of this campaign was to bring the whole of the north back into English obedience; and we know definitely that on 9th February 1304, when a truce was made between Edward and Comyn—who as guardian of Scotland had continued the resistance to England after Wallace's disaster at Falkirk—the only castle still holding out was Stirling, which surrendered after a heroic defence on 20th July following.² We may therefore conjecture that Coull Castle, *if habitable*, must have again

mittendis ad castra et villas in Scotia, quæ sunt in potestate Anglorum." Cf. Barbour, ed. Mackenzie, p. 156:—

"The King than till his pes has tane
The north cuntre, that humyly
Obeyis till his senyhory.
Swa that be north the Month war nane
That thai ne war his men ilkane."

¹ Bain, *Calendar of Documents relating to Scotland*, vol. ii., No. 1164.

² Barron, *The Scottish War of Independence*, p. 191.

opened its gates to an English garrison at some time during this northern campaign of Edward in 1303.

But was the castle habitable? In this connection we have to consider a very interesting letter addressed by John, Earl of Athole, to Edward I. some time in 1304. It will be remembered that in July 1305 this nobleman was drawing the rents on Edward's behalf from the lands of Aboyne and Coull. In the letter now under review, he prays the king to reconsider his order to deliver the Castle of Aboyne to Sir Alexander Comyn, "for the land around it is savage and full of evil-doers, and *the king has no other fortress where the country or his servants may be in safety to keep the peace.*"¹ Here, then, we are definitely told that in 1304 Aboyne Castle was the only stronghold held for England in these parts. Now there is no evidence that the Peel of Aboyne was ever a stronghold of such consequence as the great stone castle at Coull; and it is impossible to conceive that if Coull Castle also had been garrisoned on Edward's behalf by the Earl of Athole at the time he wrote—a time, be it remembered, when *we know definitely that he was in effective occupation of the lands*—he would not have mentioned it along with Aboyne Castle in his letter. Indeed, if both these strongholds were at that time held by his garrisons, we should have expected him to mention Coull rather than Aboyne, bearing in view their respective importance. The only conclusion possible from a consideration of these facts seems to be that, though the Earl of Athole occupied and drew the rents from the demesne of Coull, the castle itself was not in fit condition to shelter a garrison.

Putting all this together, therefore, it would seem that, if Coull Castle had been (as is likely) recovered by Wallace or Wallace's supporters during the campaign of 1297, it must then have been rendered untenable, so that after Edward I. in 1303 restored English rule in the north, Aboyne and not Coull became the centre, under the Earl of Athole, of English jurisdiction in this neighbourhood. It is at least a plausible conjecture that the partial demolition of the donjon was the means adopted by Wallace's men to render the castle harmless, and that this destruction had not yet been repaired—perhaps owing to the land being "savage and full of evil-doers," as Athole complained—at the date in 1304 when he wrote his letter.

In October 1305 Edward issued his famous "Ordinance for the Settlement of the Kingdom of Scotland," and all the evidence we possess seems to show that from this date until Bruce's desperate bid for the Crown in the spring of next year, the northern districts of Scotland were firmly in the English monarch's grasp. At this time—when Edward and his subordinates believed that Scotland had been finally conquered and were

¹ Bain, *Calendar of Documents relating to Scotland*, vol. ii., No. 1633.

busy with plans for her permanent settlement—it is reasonable to expect that the damage done to the donjon of Coull Castle would be repaired (as we now see it), and that the castle, thus again made tenable, continued to hold an English garrison until finally captured and destroyed by the patriotic party in 1308.

Reasoning upon such slender and largely negative evidence must inevitably be attended with risks; and until the excavation of the courtyard is completed, and all the secrets revealed that Coull Castle may still have to tell, it is well that the above conclusions should be held merely as provisional. Meantime I can only claim that they constitute at least an intelligible reconstruction of the fortunes of this great stronghold—a reconstruction which agrees, as I have said already, at once with the internal evidence so far discoverable in its remains and associated relics, and with the historical probabilities. Further than this it is impossible at the present stage to go.

In concluding this paper, I wish to express my very warm thanks to Dr Marshall Mackenzie of Lochcoull for according me the great privilege of conducting the recent excavations, the entire cost of which he has borne. It is a pleasure also to record my appreciation of the enthusiastic energy with which the strenuous work of digging on so difficult a *terrain* was carried out by my party of Boy Scouts. The Rev. Alexander Mackenzie, minister of Coull, readily afforded facilities for them to camp on his ground. To Mr William Norrie, F.S.A.Scot., Aberdeen, who acted as Clerk of Works, I am greatly indebted, not merely for the admirable arrangements which he made for the excavations—arrangements in which his practical skill as an engineer proved invaluable—but also for his excellent series of photographs. I should also like to record my obligation to Mr William J. Adair Nelson and Mr James E. Smith, Aberdeen, who assisted me to make the survey of the ruins. Sheriff David J. Mackenzie, F.S.A.Scot., Elgin, kindly allowed me to make use of the very extensive collections which he has made in regard to the history of the Durwards. I am also obliged to several of my colleagues at the University of Aberdeen for their contributions on technical matters: to Mr Charles B. Bisset, M.A., B.Sc., for his geological particulars; to Mr George Newlands, M.A., B.Sc., for the chemical analyses; to Mr Robert M. Neill, M.A., M.C., for his report upon the bones; and to Mr Macgregor Skene, D.Sc., and Miss Dorothy C. Downie, B.Sc., B.Sc.(For.), for their reports upon the vegetable remains.

MONDAY, 14th January 1924.

PROFESSOR THOMAS H. BRYCE, M.D., F.R.S.,
Vice-President, in the Chair.

A Ballot having been taken, the following were elected Fellows:—

GEORGE N. M. COLLINS, Aultnachy House, Sycamore Terrace, Corstorphine.

GEORGE DUNCAN, Advocate, 60 Hamilton Place, Aberdeen.

A. RUDOLF GALLOWAY, O.B.E., M.A., M.B., C.M., 250 Union Street, Aberdeen.

ALEXANDER FALCONER GILES, M.A. (Edin. and Oxon.), Lecturer in Ancient History, University of Edinburgh, 5 Palmerston Road.

Major PERCY GORDON LOCH, Indian Army, c/o Messrs Lloyds Bank, Ltd., Indian Branch, 16 Charing Cross, London, S.W. 1.

JAMES M'COSH, Solicitor, Swinlees, Dalry, Ayrshire.

JOHN M'DONALD, Museum Conservator, Hillhead, Balgownie, Bridge of Don, Aberdeen.

GEORGE T. RAINY, C.A., 3 Rothesay Place.

The following Donations to the Museum were intimated and thanks voted to the donors:—

(1) By H. M. CADELL, B.Sc., F.S.A.Scot., F.R.S.E., of Grange.

Food-vessel of dark brown clay, $3\frac{1}{2}$ inches in height, $3\frac{1}{2}$ inches in external diameter at the mouth, $4\frac{1}{2}$ inches at the bulge, and $2\frac{1}{2}$ inches at the base, the wall bearing triangular and roulette-like designs; from a short cist at Bridgeness, Bo'ness, Linlithgowshire. (See subsequent communication by J. Graham Callander, F.S.A. Scot.)

Thin Plate of waterworn Shale, 5 inches in greatest length, $2\frac{3}{4}$ inches in greatest breadth, of irregular shape, with one side worked to an angular edge, by what seems to be rude filing; from the natural shell deposit near Bridgeness Tower.

(2) By Colonel WALTER J. C. MAXWELL-SCOTT, C.B., D.S.O., of Abbotsford.

Cross-slab of Red Sandstone, 5 feet 11 inches in height, 3 feet 4 inches in width at the bottom, 3 feet 9 inches at the top, and 5 inches thick, sculptured on both sides in relief, found at the old castle of Woodray, Forfarshire, afterwards presented to Sir Walter Scott and preserved at Abbotsford.

It was announced that there had been acquired through the King's and Lord Treasurer's Remembrancer:—

Finger-ring, part of a Fillet, and fragment of Wire, all of Gold, found by H.M. Office of Works in loose earth removed from the south-east corner of St Ronan's Chapel (The Nunnery), Iona. (See subsequent communication by Alex. O. Curle, F.S.A.Scot.)

The following Donations of Books to the Library were intimated:—

(1) By HIS MAJESTY'S GOVERNMENT.

Liber Feodorum. Part II. A.D. 1242-93.

(2) By JOHN A. STEWART, F.S.A.Scot.

The Lake of Menteith and its Feudal Lords. By J. K. Stewart. Reprinted from the Magazine of the Stewart Society, 1923. Illustrated by the Donor.

(3) By W. DOUGLAS SIMPSON, M.A., F.S.A.Scot.

The Castle of Kildrummy: Its Place in Scottish History and Architecture. By the Donor.

Eynhallow: The Holy Island of the Orkneys. By John Mooney, F.S.A.Scot.

Fossil Men: Elements of Human Palæontology. By Marcellin Boule. Translated from the French by Jessie E. Ritchie and James Ritchie, M.A., D.Sc.

(4) By JOHN MURRAY, Albemarle Street, London.

The Bearing of Coat-Armour by Ladies: A Guide to the Bearing of Arms by Ladies of all Ranks, whether Maid, Wife, or Widow, in England, Scotland, and Ireland. By Charles A. H. Franklin, M.R.C.S.(Eng.), F.S.A.(Scot.), L.R.C.P.(Lond.). With a Preface by The Right Hon. Marcia, Countess of Yarborough.

(5) By JAMES URQUHART, F.S.A.Scot.

The Necessary Existence of God. By William Honyman Gillespie of Torbanehill, F.R.G.S., F.Z.S.

(6) By WALTER E. GAWTHORP, F.S.A.Scot., the Author.

The Brasses of our Homeland Churches.

Lunch-Time Rambles in Old London. No. 6. By London's City Walls.



(7) By Dr J. MAXWELL WOOD, F.S.A.Scot.

The Gallovidian Annual, 1923. Edited by the Donor.

(8) By KEITH S. M. SCOTT, F.S.A.Scot.

Scott, 1118-1923: being a Collection of "Scott" Pedigrees, containing all known male descendants from Buccleuch, Sinton, Harden, Balweary, etc. Compiled and arranged by the Donor.

It was announced that the following book had been purchased for the Library:—

An Inventory of the Historical Monuments in Essex (South-East). Vol. IV. Royal Commission on Historical Monuments (England).

The following Communications were read:—

I.

A NOTE ON FOUR SILVER SPOONS AND A FILLET OF GOLD FOUND IN THE NUNNERY AT IONA; AND ON A FINGER-RING, PART OF A FILLET, AND A FRAGMENT OF WIRE, ALL OF GOLD, FOUND IN ST RONAN'S CHAPEL, THE NUNNERY, IONA.
By ALEX. O. CURLE, F.S.A.Scot.

In the month of December 1922, while certain necessary measures of preservation were being carried out in the Nunnery at Iona by the Ancient Monuments branch of His Majesty's Office of Works, there were discovered underneath a stone at the west corner of the base of the south respond of the chancel arch four silver spoons and a gold fillet. The objects lay in the soil at a depth of about 3 inches below the under side of the stone, and fragments of a coarse woven fabric of linen adhering to the outer surface of one of the spoons indicated that they had been wrapped up in a cloth before being deposited in the ground. Of the spoons only one is perfect, the three others having, through natural causes, lost portions of the ends of the bowls, while the fillet, though in two pieces, is otherwise complete. In general character all four spoons resemble one another. The stem or handle is treated decoratively in two parts—the upper portion rounded and narrow, and the lower, adjacent to the bowl, flat and expanded; the bowl, as evidenced by the complete example, is leaf-shaped, rather shallow, and distinctly pointed at the extremity. The handle of each spoon terminates in a conical knop.

Though thus in general features alike, one of the spoons, No. I. (fig. 1), is quite distinct from the other three in the detail of its ornamentation. While the stem is complete, the bowl has been badly broken, and a portion at the extremity is wanting. The total length of the spoon as remaining is $6\frac{1}{2}$ inches. The stem, which terminates in a plain conical knop, measures $4\frac{1}{2}$ inches in length, of which $2\frac{1}{2}$ inches form the rounded portion with the knop, and 2 inches the flat part. The lower, or flat portion, has a breadth of $\frac{5}{16}$ inch. In the upper end of the latter is a small panel containing an eight-pointed star formed with grooves cut in the metal, while the remaining portion contains an oblong panel of geometric design, composed of oblique bisecting lines forming lozenges enclosing small foliaceous figures, of which the lines and figures have been inlaid with niello. Connecting the stem or handle with the bowl is a grotesque animal head of archaic style, recalling the grotesque heads of Byzantine and Romanesque architecture.

The remaining three spoons in form and style of decoration are practically identical with one another, though a close scrutiny reveals the fact that the execution of the details on the spoon which we shall call No. II. (fig. 2), and which is the complete example, is markedly superior to that on spoons No. III. (fig. 2) and No. IV.

The extreme length of No. II. is $7\frac{1}{8}$ inches, of which $5\frac{1}{2}$ inches represent the length of the handle, and $2\frac{1}{8}$ inches that of the bowl. The handle, as in the case of all the others, is divided into two portions—a rounded section with a knop at the extremity, $2\frac{1}{8}$ inches in length, and an oblong panel $2\frac{3}{8}$ inches in length, having at one end a cubical ornament with the angles chamfered off, and at the other a grotesque animal mask. The knop is a neatly executed fruit of the raspberry or mulberry type resting in a well-formed calyx. This terminal is a form known as the fruitlet knop, and was in vogue in England as late as the fifteenth and sixteenth centuries, and was also common during the same period on the Continent.¹ On the lower part of the rounded section of the stem are four vertical rows of notches, or slight projections, as if to represent buds on a twig. The cube has in the centre a square panel placed lozenge-wise and containing a small four-petalled floret, while the triangles formed by the chamfering of the angles are each decorated with a trefoil.

The ornament which covers the oblong panel on the flat section of the handle, consists of a series of groups of concentric elliptical curves linked together by a line of inverse curves. Small foliaceous

¹ Sir Charles Jackson (*Illustrated History of English Silver Plate*, vol. ii. p. 492) illustrates a German example of 1530-40, which, in this feature, resembles the Iona specimens.

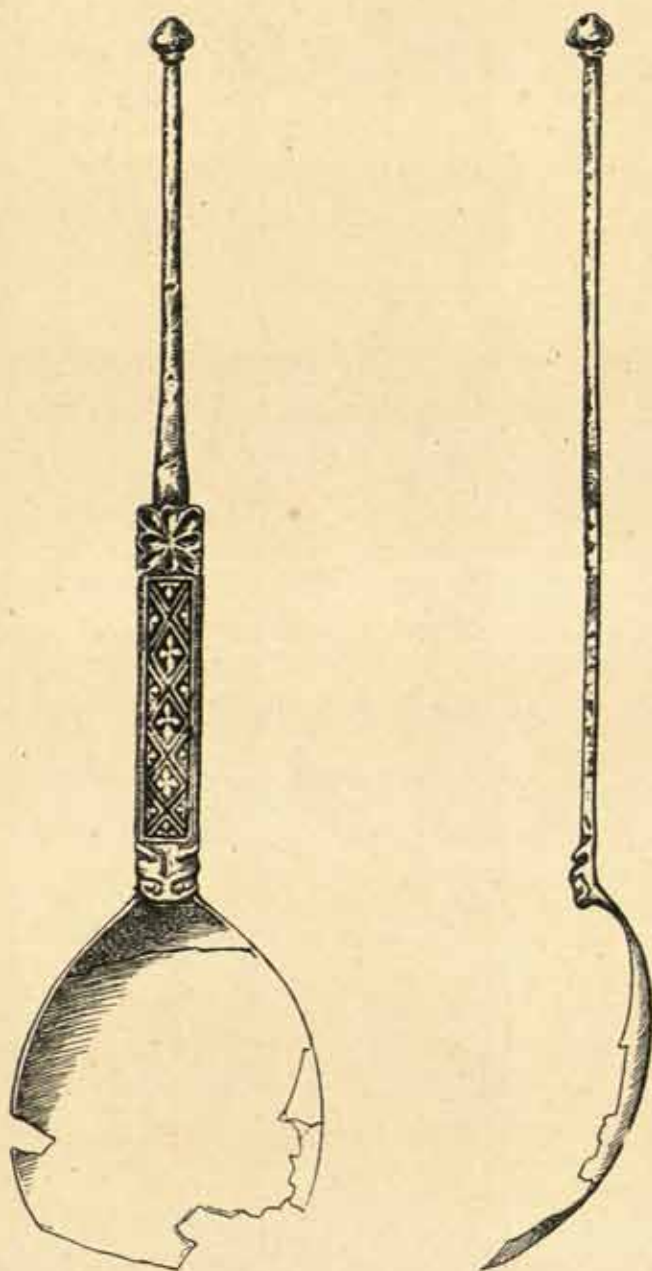


Fig. 1. Silver Spoon (No. 1.) from Iona. (1.)

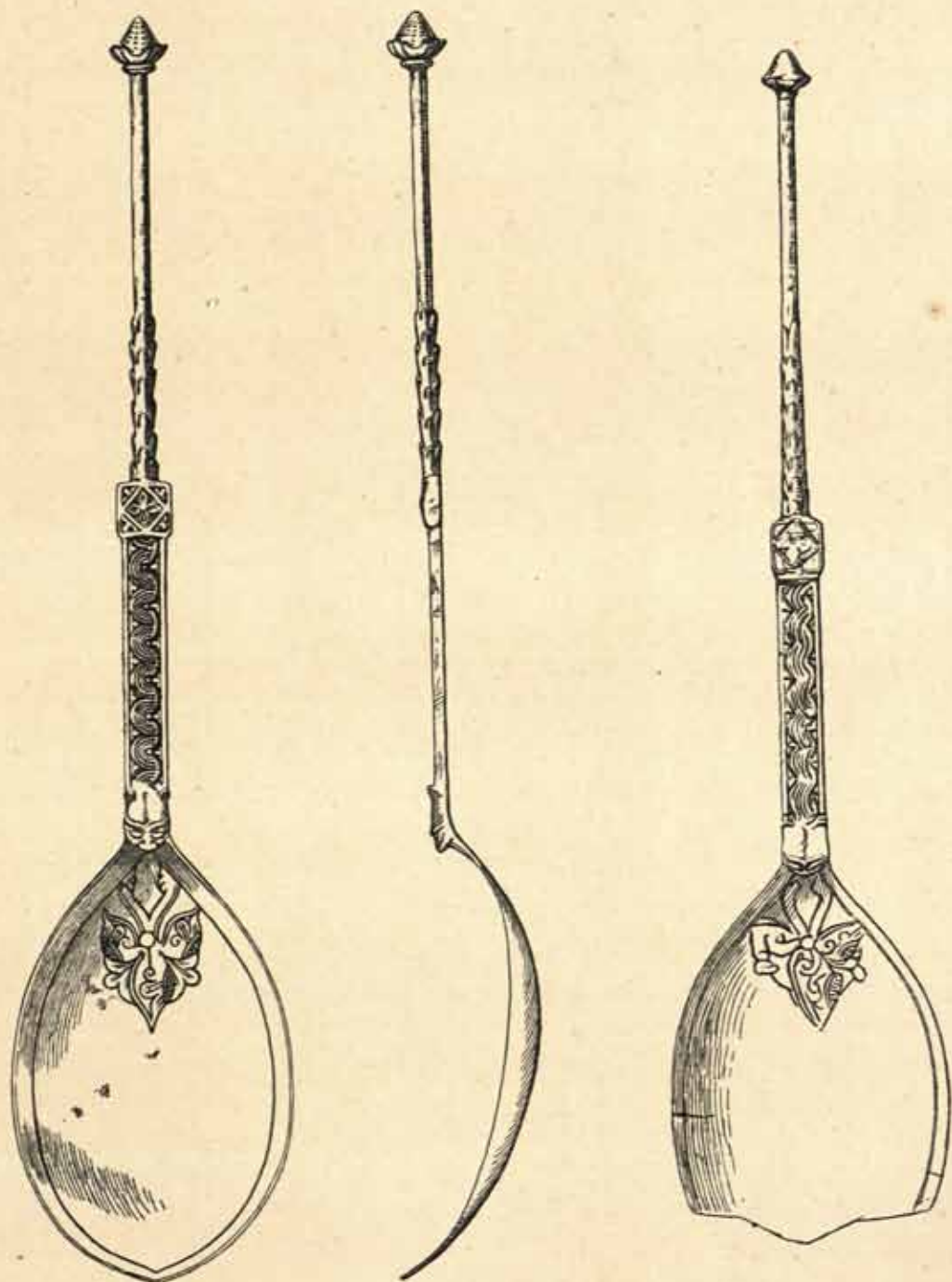


Fig. 2. Silver Spoons (Nos. II. and III.) from Iona. ($\frac{1}{2}$.)

details fill the angular spaces made at the points of junction of the respective curves. The grotesque head with which the handle terminates is treated as if grasping the bowl of the spoon. The bowl itself is leaf-shaped, rather shallow, much curved longitudinally, and fashioned with a distinct point at the extremity. Around the edge on the inside is a gilt border demarcated by an incised line. Chased at the base on the inside is a somewhat elaborate fleur-de-lis, or acanthus flower, of Gothic character, also gilt. A comparison of this spoon with the two others shows clearly that the latter are copies executed by a workman of inferior skill. The curved ornament is debased, and the lines of the fleur-de-lis weak in drawing and in execution; one can almost imagine a Celtic tendency in the suggestion of interlacing and of diverging spirals, with which the details on the surface of the petals of the acanthus have been elaborated, and which is completely absent on what may be regarded as the original spoon. As these two spoons, moreover, have perished to some extent, they were probably made of baser metal.

To what period must these interesting examples of early silver work be attributed? The history of the building in which the spoons were found, the form of the spoons themselves, and the style of the ornamentation with which they are enriched, are the factors which we have to consider in order to reach a conclusion on this point.

In the year 1203 Reginald, Lord of the Isles, introduced Benedictine monks into the Island of Iona, and at the same time a convent of Benedictine nuns was founded, of which Beatrice, sister of Reginald, was the first abbess. In the Vatican the deed of confirmation in connection with the erection of the nunnery is said to be still existing, and to be dated 1203.¹ The date of deposit of the spoons is obviously, therefore, subsequent to this.

Though spoons must have been of almost universal use in the Middle Ages, as a rule they were made of wood, or horn, and probably it was only in the houses of the wealthy that silver spoons were to be met with. Bequests of such, however, occur in certain English wills of the fourteenth century,² details of which are published, and it is interesting to note in these that they existed in sets of a dozen or half-dozen. Of such spoons few examples have survived until our time. Probably the oldest, and at the same time that which in some respects most nearly resembles the Iona specimens, is the British Coronation spoon, which has been employed probably for many hundreds of years to hold the oil poured from the ampulla for use in anointing the sovereign. There has existed some

¹ MacGibbon and Ross, *Ecclesiastical Architecture of Scotland*, vol. i. p. 421.

² Jackson, *op. cit.*, vol. ii. pp. 485 ff.

doubt as to the great antiquity of this spoon on the ground that none of the old Regalia survived the Commonwealth, but Sir Charles Jackson,¹ after due consideration, gives it as his opinion that "the weight of evidence clearly indicates the twelfth or beginning of the thirteenth century, rather than the seventeenth, as the date of the fabrication of this important item of our Coronation Regalia."

The resemblance to the Iona spoons is, however, more general than particular. The stem of the Coronation spoon is in three sections, whereas that of our type of spoon is in two. The upper sections of the former, nevertheless, in respect that they are rounded and flat, suggest an analogy. Moreover, grotesque animal heads divide these sections, and terminate the stem where it joins the bowl, exactly as occurs on the Iona spoons, and not on any of the other surviving mediæval spoons in this country. Further, the rich decoration of the bowl with an arabesque pattern, in detail resembles the single acanthus flower in the bowls of our Scottish spoons. The form of the bowl differs essentially, but that has been specially constructed with two lobes suitable for the fingers of the prelate performing the anointing ceremony. But the form of the bowls of our examples is also evidence of an early date, for the pointed leaf shape gives place to a round-ended bowl in later times. A spoon with a bowl having a pointed end, but in base metal, was found in Westminster, and was illustrated by Mr Hilton Price,² who considered that it belonged to the thirteenth or fourteenth century. Another of silver, and French in origin, but with the point rather less pronounced, is illustrated by Sir Charles Jackson,³ who dates it to about 1400. A silver example in our National Museum of Antiquities, also rather obtusely pointed, was found in a grave in the churchyard of Brechin with a hoard of silver pennies of the reigns of Alexander III., Edward I., and Edward II., thus indicating a date for the deposit in the first half of the fourteenth century.

As the style of the handles of the Iona spoons bore some resemblance to that of certain Scandinavian spoons of the sixteenth and seventeenth centuries, I thought it worth while to send a photograph to Stockholm and inquire of the director of the Northern Museum if any similar spoons of an early date were under his charge. In reply he sent me an illustration of a spoon, part of a treasure found at Dune, Dalhems-Socken, in the Island of Gotland, and now preserved in the National Historical Museum at Stockholm. This treasure is supposed to have been concealed on the occasion of a Danish invasion of Gotland in 1361, but the spoon and other objects composing it were attributed by Dr Hildebrand⁴ to the

¹ Jackson, *op. cit.*, pp. 481 ff.

² *Op. cit.*, p. 487, fig. 579.

³ *Old Base Metal Spoons*, p. 21, fig. 4.

⁴ Hildebrand, *Sveriges Medeltid*, Tome i., pt. 188.

thirteenth century. Though the bowl is rounded and not pointed at the end, there is a certain resemblance in the style of the handle to the Iona spoons. In the first place, it is in two sections, the upper rounded, and the lower flat. A rosette divides the two parts, and at the lower termination of the handle, as it were gripping the bowl, we again find the grotesque head.

The ornamentation on the flat panel of spoon No. I. does not help much in fixing the date, as that particular geometric design with four-leaved foliaceous forms contained within lozenges occurs over a long period of time; the motive, however, which has been employed to fill the flat panel of the original spoon of the set of three is more restricted in the period of its occurrence. A search through numerous English illuminated MSS. in the British Museum did not reveal it, but close analogies occur in various examples of continental enamelled metal work. These designs take the form of repeating arcs with, usually, some small foliaceous detail within the curves, or between them. An example may be seen on the enamelled movable altar of Saints Felix and Blasius at Paderborn in Germany, dated about 1118.¹ Another occurs on the borders of the reliquary of Saints Gondulf and Candidus, preserved in the "Musée de Cinquantenaire" in Brussels,² of date 1165. An ornament of the same character may be observed employed to fill a small oblong panel on the shrine of Charles the Great at Aix-la-Chapelle, and attributed to the year 1213.³ But probably the closest analogy occurs in the border, both at the base and on the dexter side as well as on the front of the arch, on the enamelled plaque from the tomb of Geoffrey Plantagenet, Count of Maine, made in the year 1151, and preserved in the Museum at Le Mans. In one respect the analogy with these examples falls short. In none of them does there occur the series of inverse curves connecting the groups of elliptical curves at their bases. This feature might lead one to suppose that the ornament under discussion had no real connection with the foregoing examples but was derived from a wave motive. It is hardly likely, however, that the continuous, easily produced, and comprehended lines of a mere undulating design would be degraded into an ornament consisting of a series of distinct groups of concentric curves, whereas the contrary process can be clearly seen on the handles of the two other spoons. On these we have this peculiar design copied by unskilled craftsmen, ignorant of the significance of what they were copying, and thus producing a series of undulating lines rendering it as a simple wave pattern. They have still retained, however, at either edge of the panels the small foliaceous details.

¹ *Deutsche Schmelzarbeiten des Mittelalters*, pl. 14.

² *Ibid.*, pl. 80.

³ *Ibid.*, pl. 97.

As the earlier of our known spoons, excepting the Coronation spoon, show the bowl with a slight point at the extremity, and those following with a bowl completely rounded at the end, we may assume that the pointed variety is the more ancient. And in respect that the Iona spoons have a much more pointed form than the example in our National Museum found with coins, the latest of which belonged to the reign of Edward II. (1307-27), we may infer that the former is even more ancient, and thus possibly a product of the twelfth or thirteenth century. The curious curved ornament from the analogies quoted seems to point to the same conclusion, and tends even to weight the scales in favour of the earlier century.

The fillet of gold (fig. 3) which accompanied the spoons is in two pieces, but measured when complete 13 inches in length, $\frac{1}{2}$ inch in breadth at the centre, tapering to an obtuse point at either end. Its weight is 129.7 grains. It is formed of a thin plate of beaten gold, and is ornamented in repoussé with a foliaceous design in repeating divergent scrolls, with a border of small pellets around the entire edge. At each extremity there is a small perforation for a thread to draw the ends together when being worn. The ornament is of a character that would be quite consistent with a twelfth- or thirteenth-century date for its employment—in fact, almost the identical pattern may be seen forming one of the inner borders on the plate of Limoges enamel, mentioned above, from the tomb of Geoffrey Plantagenet.

Subsequent to the foregoing discovery, while the representatives of His Majesty's Office of Works were engaged in removing a quantity of loose earth from the south-east corner of St Ronan's Chapel, within the precincts of the Nunnery, on 29th September 1923, they made a further find of treasure. This consisted of a finger-ring, a large and a small portion of another fillet, and a small fragment of wire, all of gold. These objects were closely associated, inasmuch as the portion of the fillet was found folded up within the circumference of the ring, and kept in position by the fragment of wire used to wedge it in.

The finger-ring (fig. 4) measures $\frac{3}{8}$ inch in diameter, weighs 84.9 grains, and consists of four wires intertwined so as to form a plait, with the ends welded together and fashioned into a small lozenge-shaped bezel.



Fig. 3. Gold Fillet and part of another from Iona. ($\frac{1}{2}$.)

Rings of this type, of which there are already several in the National Museum of Antiquities, are generally attributed to the Viking period, say from the eighth to the tenth century, but the circumstances under which one of those in our Museum and another in the British Museum have been found, point to their continuing in use to a later date. The specimen in our Museum was found at Plan, in the Island of Bute,¹ with three gold fillets and coins of David I. of Scotland and of Henry I. and Stephen of England, while an example in the British Museum² was found with coins of Edward the Confessor, Harold, and William I. in a vessel of red earthenware at Soberton, Hants.



Fig. 4. Gold Finger-ring from Iona. (1.)

The period of the erection of St Ronan's Chapel is not known, but certain architectural details suggest a thirteenth-century date.

The portion of a fillet (fig. 3) amounts to about one-half, and measures $7\frac{1}{8}$ inches in length, tapering from $\frac{7}{16}$ inch at the fractured end to $\frac{5}{16}$ inch at a point just short of the perforated disc which has formed the other extremity, and weighs 84.9 grains. A border of minute repoussé pellets runs along each edge, and the end of the fillet is ornamented for a distance of $1\frac{1}{4}$ inch from the circular termination onwards, with a row of double-struck pellets, which at the inner end, by the arrangement of two pellets in a lateral position, takes the form of a small cross. The second portion of this fillet measures only $\frac{11}{16}$ by $\frac{3}{16}$ inch, and weighs .5 grain.

The fragment of wire is of circular section, measures $\frac{1}{2}$ inch in length, $\frac{3}{32}$ inch in diameter, and has a weight of 15.4 grains.

The fact that these two groups of objects were found in sacred buildings prompts the suggestion that they have served some ritualistic purpose; or, in the case of the fillets, that they have been used for the embellishment of some holy image. Though spoons were certainly used in pre-Reformation Churches, and are still to a limited extent so employed in Roman Catholic services, there is nothing about these spoons either in their form or in their ornamentation, for they bear no sacred emblems, that would indicate a purpose restricted to religious uses. The very fact of their similarity and number seems to point to their being rare surviving examples of choice domestic spoons of the Middle Ages.

As for the fillets, such objects were in use as part of the female *parure* worn in the hair from early times, and the resemblance of at least one such object belonging to the Mycenaean Age found in Ægina, and preserved in the British Museum,³ to those from Iona is striking.

¹ *Proceedings*, vol. v. pp. 235, 373.

² *Catalogue of Finger-Rings*, p. 36, No. 215.

³ *Catalogue of Jewellery in the British Museum*, p. 51, No. 691, pl. vi.

Such ornaments are also occasionally represented as adorning the heads of women on Greek vases of the fourth or fifth century B.C. But more germane to our inquiry is the existence of the fashion in the second half of the thirteenth and in the fourteenth century. During this period the hair was worn gathered into protuberances above the ears and covered with a net, or the light linen veil known as a wimple. Above such a covering, and to keep it in position, was placed a fillet or chaplet.¹ But we may conclude that such fillets were worn even earlier than the second half of the thirteenth century from the finding of three, as previously mentioned, at Plan, in the Island of Bute, in 1863, at a spot some 300 yards distant from St Blane's Chapel, with twelfth-century coins and the gold ring before referred to, circumstances which point to a date for the deposit somewhere in that century.

How these various objects came to be within the walls of the Nunnery it is hard to say. It seems unlikely that such vanities as gold fillets and rings were permitted to the nuns, or that the domestic spoons employed in the convent were of such a costly character. There is a possibility that they were part of the treasure of the Nunnery, the worldly possessions of some sister relinquished by her on taking the veil.

What do the circumstances of the find disclose as to the purpose of concealment? In the one case, we have the spoons carefully wrapped up in some material, and the fillet in two pieces, probably with the intention of reducing its length and so rendering it more easily wrapped up with the spoons. In the other case, we find the half fillet actually crushed into small compass and jammed inside the ring. Had these objects been merely concealed on the threat of some hostile raid, to be brought forth again after the danger had passed, there would have been no need to mutilate them; but treatment so obviously regardless of form and appearance suggests that they have been the booty of some thief hidden with a view to ultimate disposal. That the rascal met his fate and lost his ill-gotten gains is the obvious conclusion.

The spoons and other objects were acquired through the King's Remembrancer for the National Museum of Antiquities.

¹ Camille Enlart, *Manuel d'Archéologie Française*, Tome iii., Le Costume, p. 184, figs. 183 and 184.

II.

NOTES ON STONE AND FLINT IMPLEMENTS FOUND ON THE
FARM OF FOULDEN MOORPARK, BERWICKSHIRE. BY
ROBERT KINGHORN, F.S.A.Scot.

At the term of Whitsunday 1911, we—the other members of our household and myself—entered into the occupancy of the farm of Foulden Moorpark, on the Foulden estate, then the property of Sir James Wilkie Dalzell of Binns. Very shortly after commencing the cultivation of the land for the turnip crop, it became apparent that the scene of our labours had been an inhabited site in prehistoric times. Few days passed without flint implements and chips being found. Our interest being aroused, a careful look out has been kept for these relics of the past. During our twelve years' tenancy of the farm, which ended Whitsunday 1923, fifty stone and over four hundred flint implements have been found; while flint chips, obviously struck off in the manufacture of tools, must be numbered by the thousand.

Moorpark Farm (fig. 1) extends to about 126 acres, and is situated on the ridge of ground which, commencing near Berwick-on-Tweed, ends somewhat abruptly at Chirnside. The farm from its highest point in the field known as the Freestonehill, about 460 feet above sea-level, has a slope to the south and east, its lowest part being in the Crawlea field, 376 feet. Before being drained about forty years ago, the lower parts of the farm were wet and abounded in marshy spots. The higher parts, being of light porous soil, have never required much drainage, and have always been dry. In accordance with this, we found that the flints were most numerous in the high and dry fields, and in the low parts were mostly found on the knolls and a dry ridge. It is perhaps worth noting that the area of low, flat land between Moorpark and the farm of Foulden Hill, before being drained, was a series of shallow lochs and marshes extending to an area of about 30 acres. In the memory of old people I have met, these lochs were much frequented by wildfowl, and no doubt would abound with fish in prehistoric times. From the high ground down to the margin of the old-time loch runs a low ridge of ground which would furnish dry footing at all times of the year. That this ridge was made use of is proved by the fact that flints and chip-pings have been more numerous found down its course than on either side. No doubt the settlement derived its supply of wildfowl and fish from this source. The site seems to have had its focus in the Freestonehill field, particularly on the edge of a terrace with a rather sharp

fall to the south. From this part an extensive view is obtained across the valleys of the Whitadder and Tweed to the Cheviot Hills. By reason of its southerly aspect and dry situation, this would be a desirable spot for inhabitation. Near here three axes have been found within a radius of about 50 yards. Altogether six axes have been found in this one

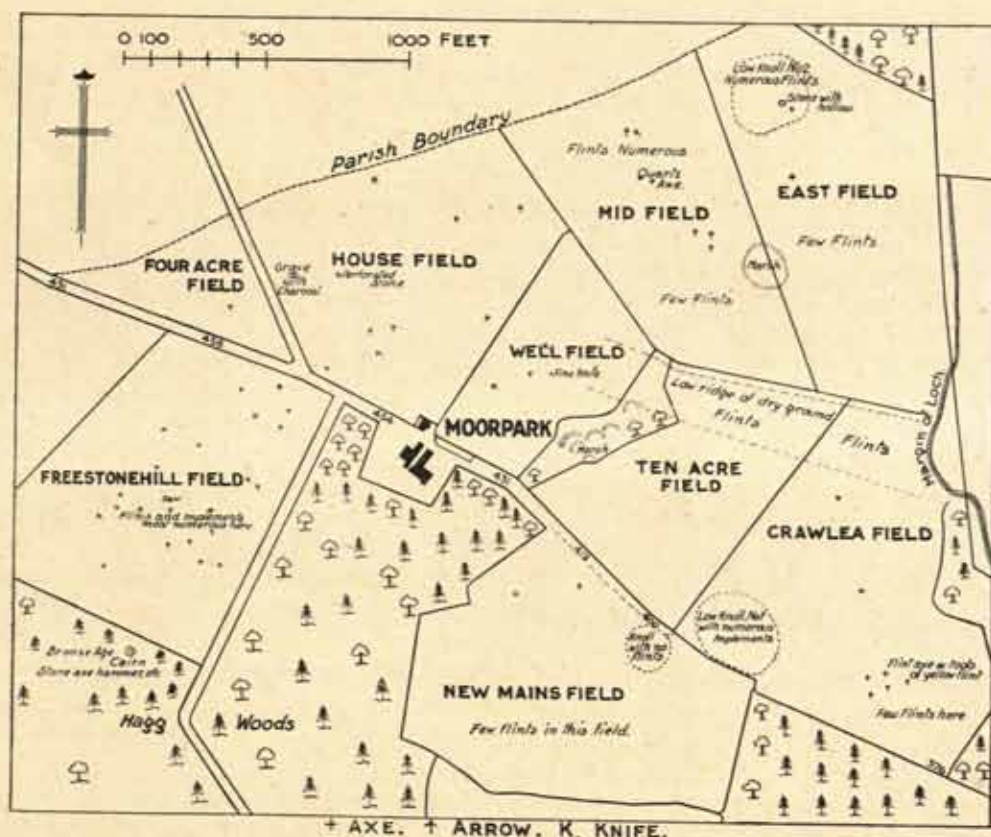


Fig. 1. Map of Foulden Moorpark Farm, showing localities of finds.

field. It has also furnished a large proportion of the flints. In the lower fields the two knolls most productive of implements are marked on the map. Knoll No. 1 is situated in Crawlea field. It is quite a low rise in the ground, but is sandy and dry. A curious fact is, that a similar knoll only about 50 yards away, and to all appearance even better suited for occupation, has been entirely barren. Knoll No. 2 is in the East field, and has furnished a good many objects. That the district was inhabited into the Bronze Age is proved by the excavation of two cairns of that

period containing cists conducted by Mr J. Hewat Craw, F.S.A.Scot., in 1913, in the adjacent Hagg Wood, the results of which were communicated by him to the Society, and published in the *Proceedings*, vol. xlviii. p. 316. I may add that the site of another cist was excavated by me in 1914 in the House field. Some stones were found to impede the plough, and on digging them out a pit of forced earth was found. About 18 inches from the surface a good deal of charcoal was recovered, but no other relics. The relics found in association with the burial mounds in the Hagg Wood were two food-vessels, a stone hammer, and flint knives and scrapers. Although a careful look-out has been kept, no trace of bronze has ever been found.

It is one of the interests connected with collecting stone and flint implements on so restricted an area as that of Moorpark, that one is almost certain to find examples of nearly all the tools used on that area. As the detailed description shows, their variety is surprising, and proves how far specialisation of tools had been carried. It is also interesting to note the relative numbers of the various types. Although it is somewhat difficult to place every implement according to type, the various kinds shading into each other, an analysis gives the following approximate results. Of stone implements hammer-stones head the list, thirty-one having been found. Axes are next with fifteen whole or broken specimens. Apart from axes and hammers, very few tools of stone appear to have been used. Two anvil stones, half of a perforated stone, and a stone with a hole drilled some distance into it complete the list. Of the flint implements, including a few of chert and quartz, the thumb- or horseshoe-scraper heads the list with one hundred and fifteen specimens. This is, I believe, in accordance with the fact that this species of implement was the most common tool of prehistoric man. Scrapers with longer handles, many of them not so rounded on the working edge as the horseshoe variety, number forty-one; arrow-heads of the various types, forty; knives, various, forty; implements which may have been used either as knives or scrapers, forty-four; boring points, seven; gravers and pointed tools, fourteen; hollow scrapers, three; small worked flints, twenty-one; saws and toothed flakes, ten; implements of unusual shape, seven; flints of a somewhat nondescript nature, which may have been used as knives or scrapers, as all bear secondary chipping, sixty-six.

In giving a more detailed description of the various tools, the hammer-stones are round, water-worn pebbles of quartz or quartzite with flat sides, battered round the edge with use. Only on two of a longer type, measuring $4\frac{1}{2}$ inches and 5 inches long by 3 inches wide, do traces of shaping and grinding appear. Of the fifteen axes found only

four were entire. The best specimen from Freestonehill is of greenstone, measuring 4 inches long by $2\frac{1}{2}$ inches wide. It was found a few months after our entry into the place. The largest entire axe found, measuring $5\frac{1}{2}$ inches by $2\frac{1}{4}$ inches, also from Freestonehill, of a hardened sedimentary stone, is exceeded in size by an axe from Crawlea field, of which the fragment, 5 inches long, is apparently little more than the half. A

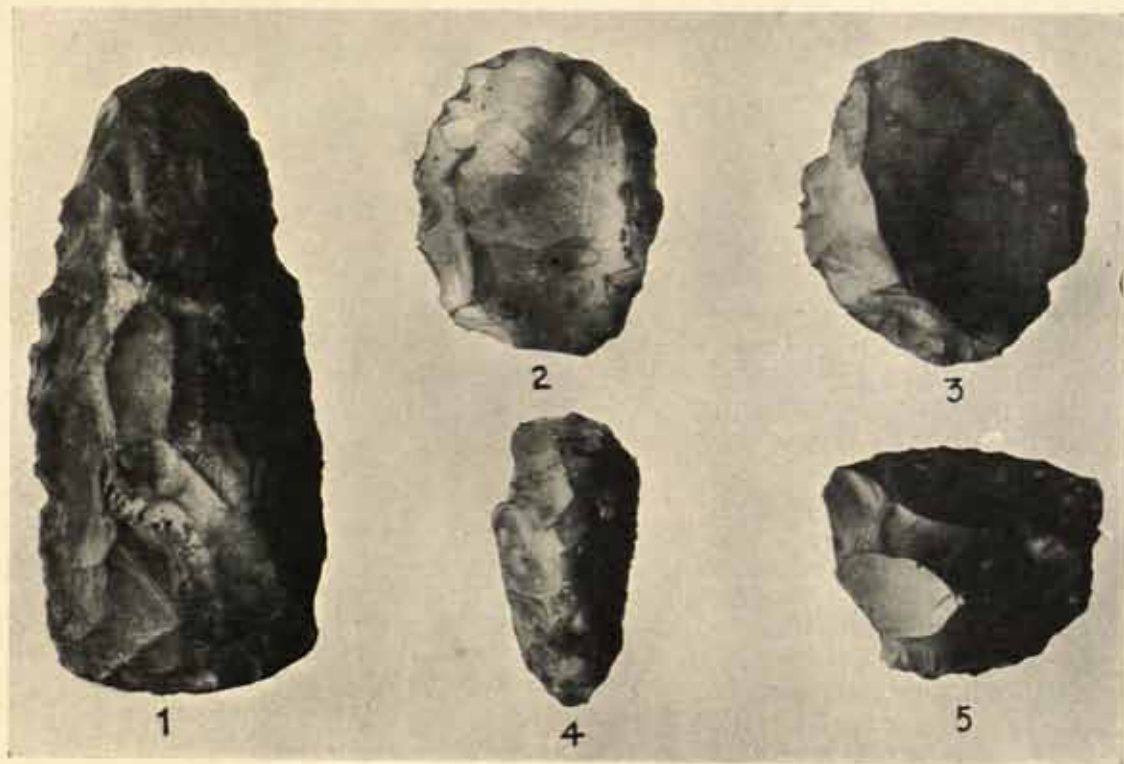


Fig. 2. Flint Axe and Scrapers. (1.)

curious feature of the fractured surface is that it has been ground into a hollow curve. Perhaps after being broken the butt part may have been used to grind other axes into shape. An axe of hardened mud-stone, measuring $4\frac{1}{2}$ inches by $2\frac{1}{2}$ inches, is much wasted. A small flint axe (fig. 2, No. 1) found by me in Crawlea in 1917, measuring $3\frac{1}{2}$ inches by $1\frac{1}{2}$ inch, is of yellow-brown mottled flint, made with bold flaking without any subsequent grinding or polishing. It was found in a low, flat part of the field where few flints occur. About the same time other four implements of similarly coloured flint (fig. 2, Nos. 2 to 5) were found. This axe

is the largest implement of flint found on the place. The other four flints—scrapers—are also decidedly larger than the average. One wonders if some man of the Stone Age suffered the loss of his entire kit of tools of yellow flint in the marsh. One day, walking through the Mid field, I noticed a piece of white quartz of unusual shape. On picking it up it was found to be part of an axe. Unfortunately, the fragment is small, but there is enough to show that the implement must have been a fine one of beautiful colour and finish. One side is rounder than the other. The edge shows the flattening characteristic of many stone axes. This fragment, along with the fine axe of white quartz¹ in my collection from another part of Berwickshire, proves that prehistoric man fashioned so intractable a material as quartz into cutting implements of great beauty of shape and finish. A fragment of an axe from the knoll in the East field looks as if it had been subjected to the action of fire. Another greenstone axe comes from the same part. A small greenstone axe from the Freestonehill, measuring $3\frac{1}{4}$ inches by $1\frac{1}{8}$ inch, is the smallest found. The other axes are of hardened sedimentary stone and call for no detailed description.

One day, when ploughing in the House field, in lifting the last furrow the plough went a little deeper than usual, and turned up a stone which on examination proved to be the half of a perforated stone of a hard reddish sandstone. It measures about $3\frac{1}{2}$ inches in diameter by $1\frac{1}{2}$ inch thick. The hole, $\frac{1}{2}$ inch in diameter, is worked from both sides, and is put through in a slightly slanting direction. A stone of quartzite from the knoll in the East field is roughly circular except at a part of the edge, which is straight; it measures $2\frac{1}{2}$ inches across and $1\frac{1}{2}$ inch thick at one edge, but is considerably thinner at the other. It has a hole $\frac{3}{8}$ inch in diameter drilled into it to a depth of $\frac{1}{2}$ inch. On the other side the stone is slightly hollowed, and at the deepest part shows the commencement of another hole. On the greater part of the surface the stone has been roughened by picking. Perhaps this was done to give the hand a more secure grip. The two anvil stones are water-worn quartzite stones of a longish shape. Both are broken and have the natural surface mostly destroyed by use.

IMPLEMENTS OF FLINT, CHERT, ETC.

The one hundred and fifteen thumb-scrapers found vary in size from $\frac{3}{8}$ inch to $1\frac{3}{4}$ inch across. They are of all degrees of workmanship, some specimens being finely made and others showing little care bestowed on them (fig. 3). The base is mostly straight or slightly rounded. One

¹ This axe is now on view in the Museum.

specimen is noticeable for having the base a hollow angle, and another, No. 7, is made of green radiolarian chert. Twelve bear evidence of calcination. The forty-one scrapers with longer handles than the horse-shoe type (fig. 4, Nos. 1 to 9) range in size from $\frac{1}{2}$ inch by $\frac{3}{8}$ inch to $1\frac{1}{2}$ inch by 2 inches. A fine scraper of the duck-bill type, but with slanted edge, is from the Freestonehill. Two, of which one is calcined, are small

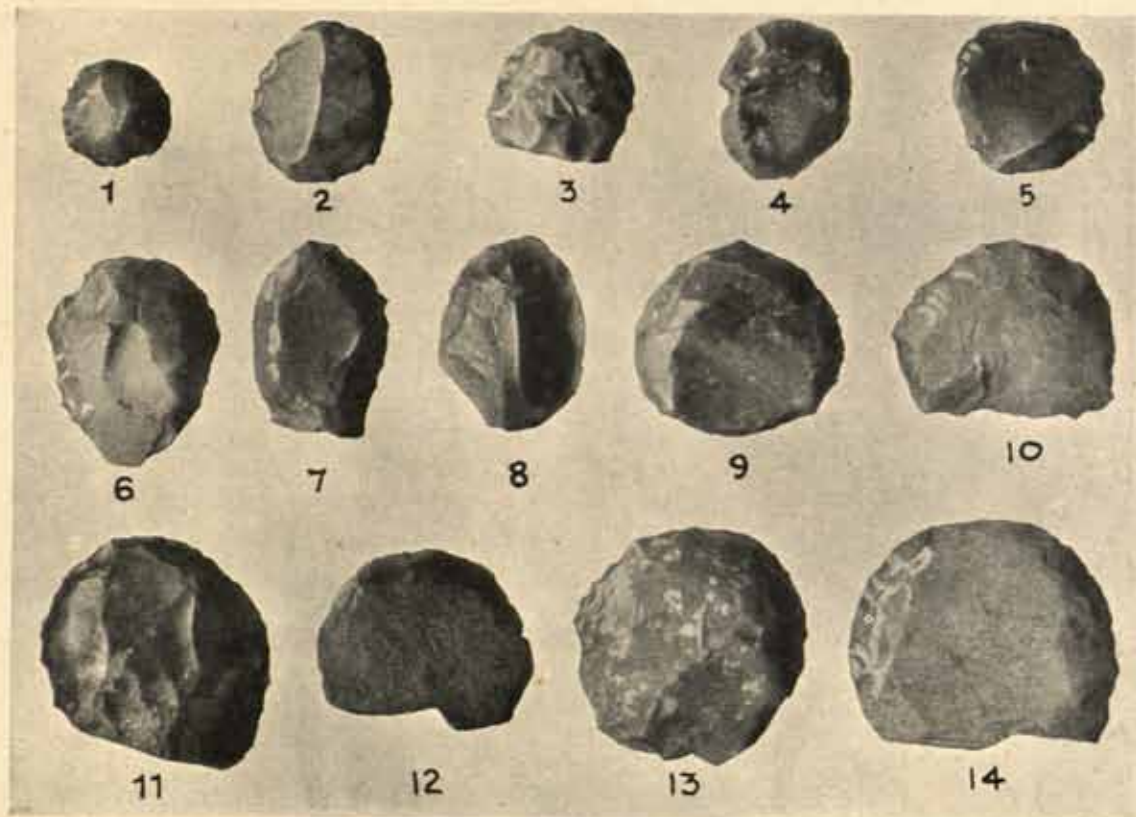


Fig. 3. Flint Scrapers. (1.)

scrapers with handles narrower than the head, giving them a tanged appearance. Another has a hollow worked in the base.

Of the forty arrow-heads found, of which fifteen are illustrated in fig. 5, all are of flint except one, No. 3, which is of dark grey chert. Of the various types, six are barbed and stemmed, five lozenge-shaped, twelve leaf-shaped, and nineteen triangular, or nearly so, some having a slightly rounded base. No. 1, a beautiful barbed and stemmed specimen, $1\frac{1}{4}$ inch by 1 inch, was found on the farm of Foulden Hill in a field

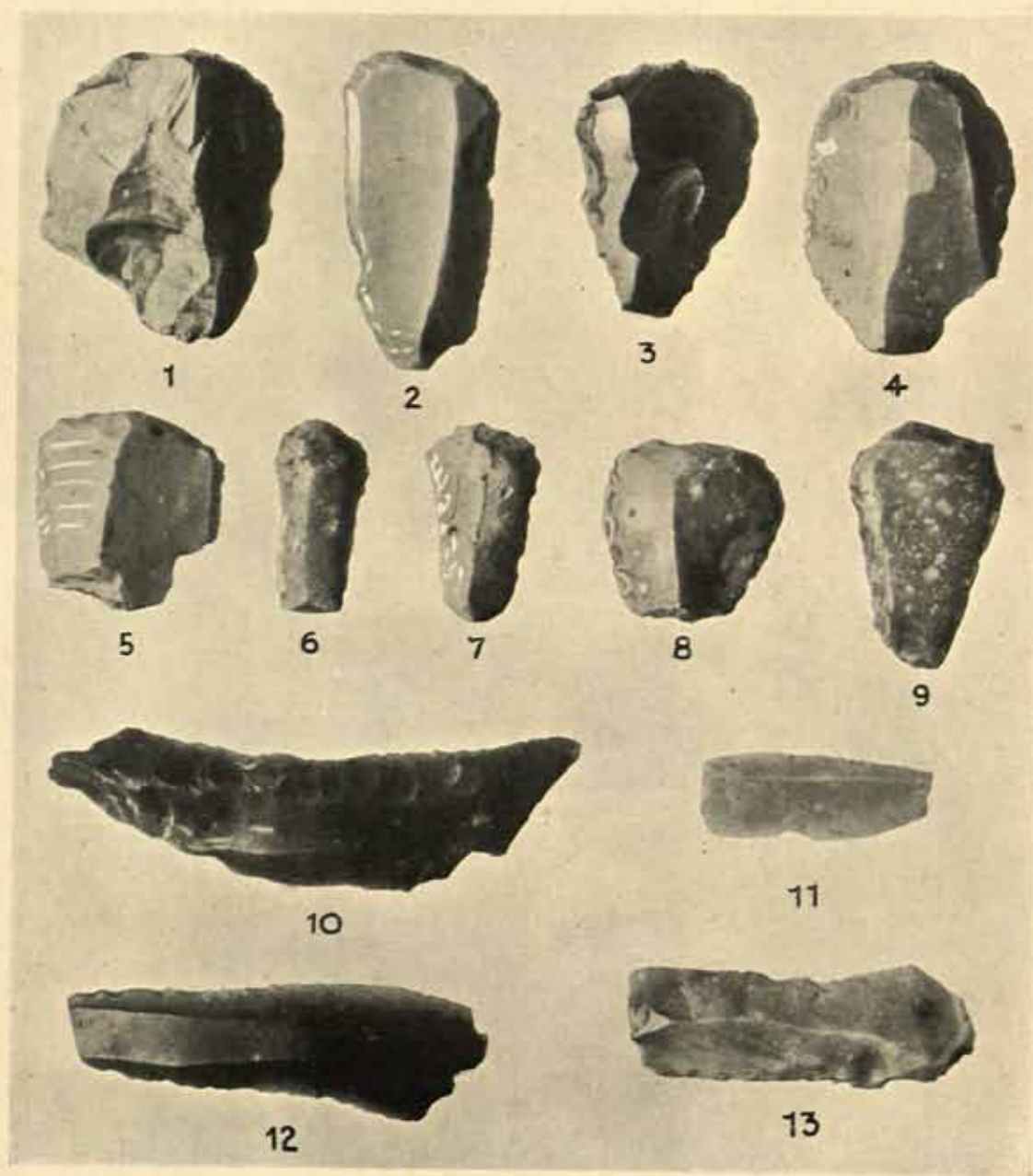


Fig. 4. Flint Scrapers and Saws. (1.)

adjoining Moorpark. The smallest of the class, No. 2, is $\frac{1}{16}$ inch by $\frac{1}{8}$ inch. The finest of the lozenge type, No. 6, is $\frac{9}{16}$ inch by $\frac{1}{2}$ inch, and shows

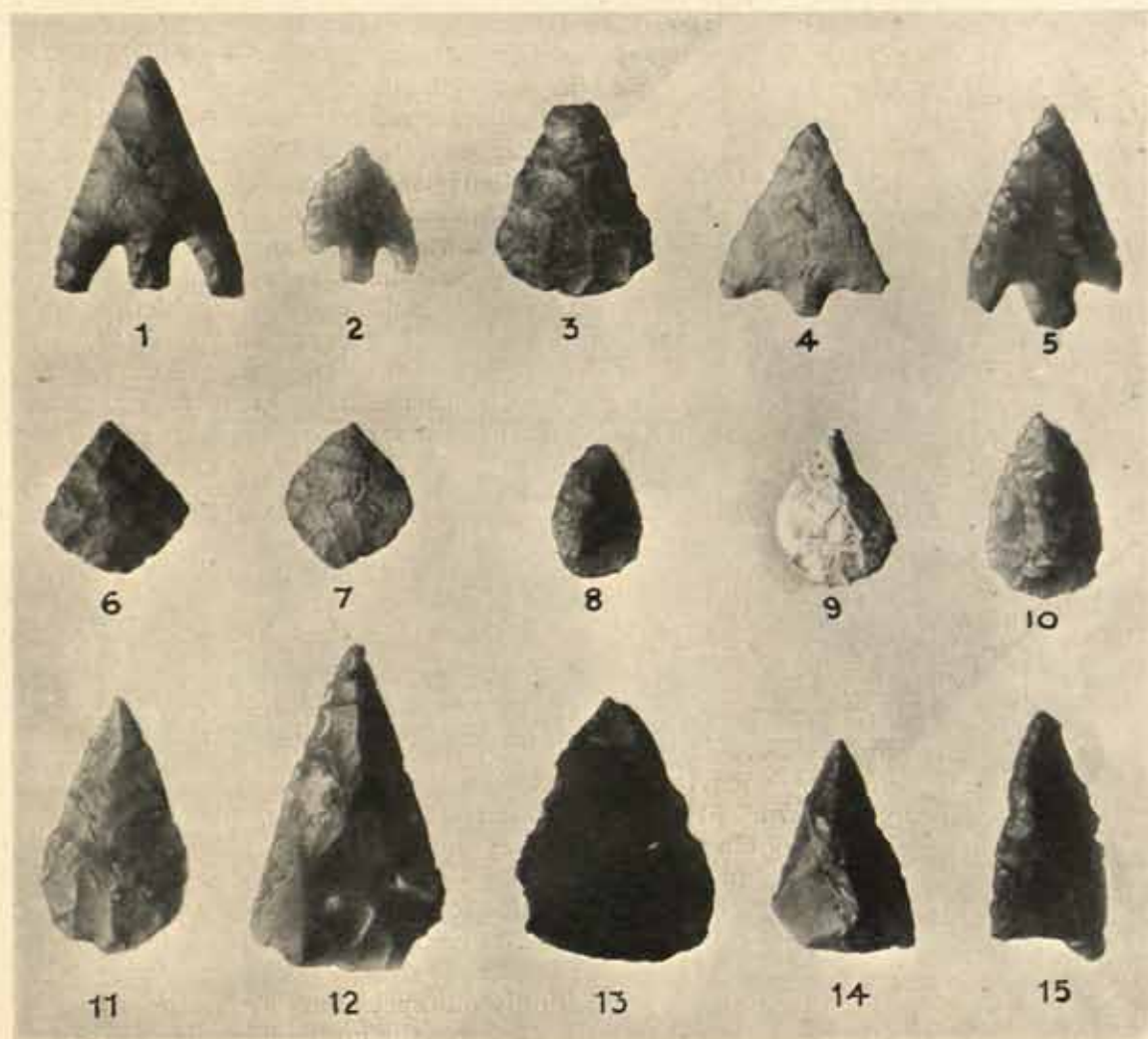


Fig. 5. Flint Arrow-heads. (†.)

workmanship of a very high order. No. 15, from the Freestonehill, measuring $1\frac{1}{4}$ inch by $\frac{3}{8}$ inch, is of the ordinary lop-sided type, with the secondary chipping mostly on the short side and hollow base; and another from the same field, with point and base broken off, is noteworthy as

having the finest ripple-flaking of any flint found. Three from their larger size may have been spear-points.

The knives, of which thirteen are illustrated in fig. 6, number forty. No. 1 is a finely worked curved knife from the Freestonehill, $2\frac{3}{8}$ inches by $\frac{1}{2}$ inch in size. No. 5 is of radiolarian chert, somewhat roughly made. No. 7 is a large knife, measuring $2\frac{1}{8}$ inches by $1\frac{3}{8}$ inch. No. 8, an imperfect knife, is $1\frac{1}{2}$ inch by $1\frac{1}{2}$ inch in size, and well made with bold flaking. No. 10, which is finely chipped all round the edge, is of pitchstone. No. 12, $1\frac{1}{2}$ inch by $\frac{1}{2}$ inch, has two hollows worked out opposite each other $\frac{1}{4}$ inch from the point. No. 13, a knife with double curve, $2\frac{1}{8}$ inches by 1 inch, has a hollow worked out near one end. There are also other forty-four implements, which might serve the double purpose of knives or scrapers; in many cases it is difficult to say which.

Of the ten saws and toothed implements, a few are shown in fig. 4, Nos. 10 to 13. No. 10, from the Freestonehill, is the largest, 3 inches by $\frac{1}{2}$ inch; one edge is dressed and finely toothed. No. 11, $1\frac{1}{2}$ inch by $\frac{1}{2}$ inch, from the House field, has been much used, the teeth being worn away except for $\frac{1}{4}$ inch of its length. No. 12, from the same field, is toothed on both edges. It is remarkable for the neatness and fineness of the serrations, which number 28 to the inch.

The graters and borers number fourteen, several being illustrated in fig. 7, Nos. 1 to 7. In No. 1, 3 inches by $\frac{1}{2}$ inch, the natural curve-fracture of the flint is taken advantage of to make a very keen point. Amongst the others are examples of an interesting class, having the point in an oblique direction.

Two of the hollow scrapers, which number three, are illustrated in fig. 7, Nos. 8 and 9. No. 8 is worked into two small hollows, while No. 9 has a broad, shallow concavity.

Of the ten flints worked to a long point, Nos. 2 and 3 are like knives, but could serve the double purpose of knife and borer. No. 4 is triangular in shape and resembles an arrow-head.

There are twenty-two flints of small size which might be taken as pigmy flints, but none of them shows the characteristic forms of that class.

A number of implements, of which only one specimen has been found, are as follows:—A core-like object, 1 inch across the under side, which has the outline of a horseshoe-scraper. It is about $\frac{3}{4}$ inch thick and is contracted upwards, giving it the appearance of a miniature horse-hoof. Secondary working shows round the lower margin. The only implement I can find that it bears any resemblance to is the keeled scraper, an implement of the Upper Palæolithic which has been traced down to at least Azilian times. The material is a quartz-like stone. Fig. 7, No. 15, is a

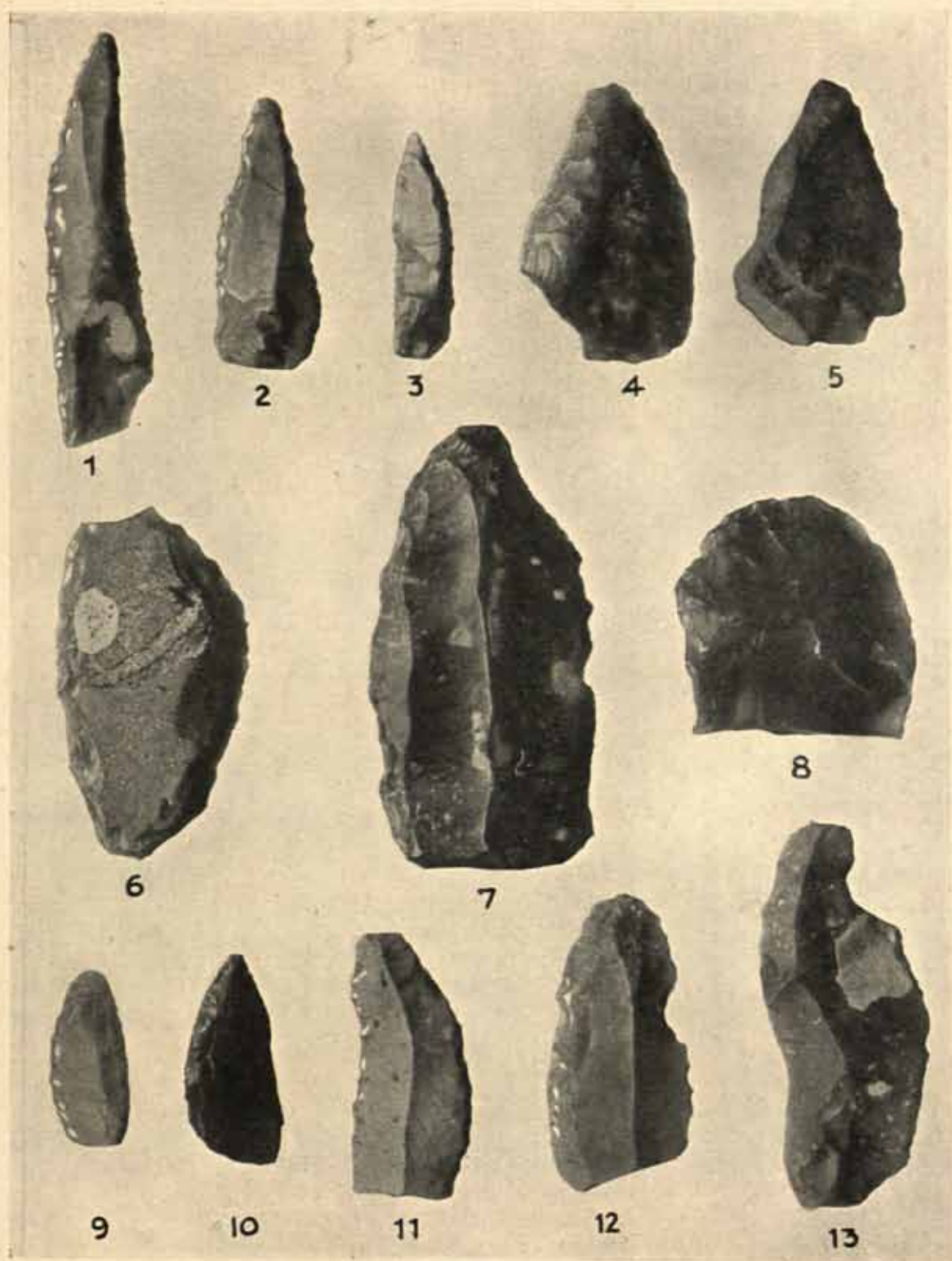


Fig. 6. Flint Knives. (1.)

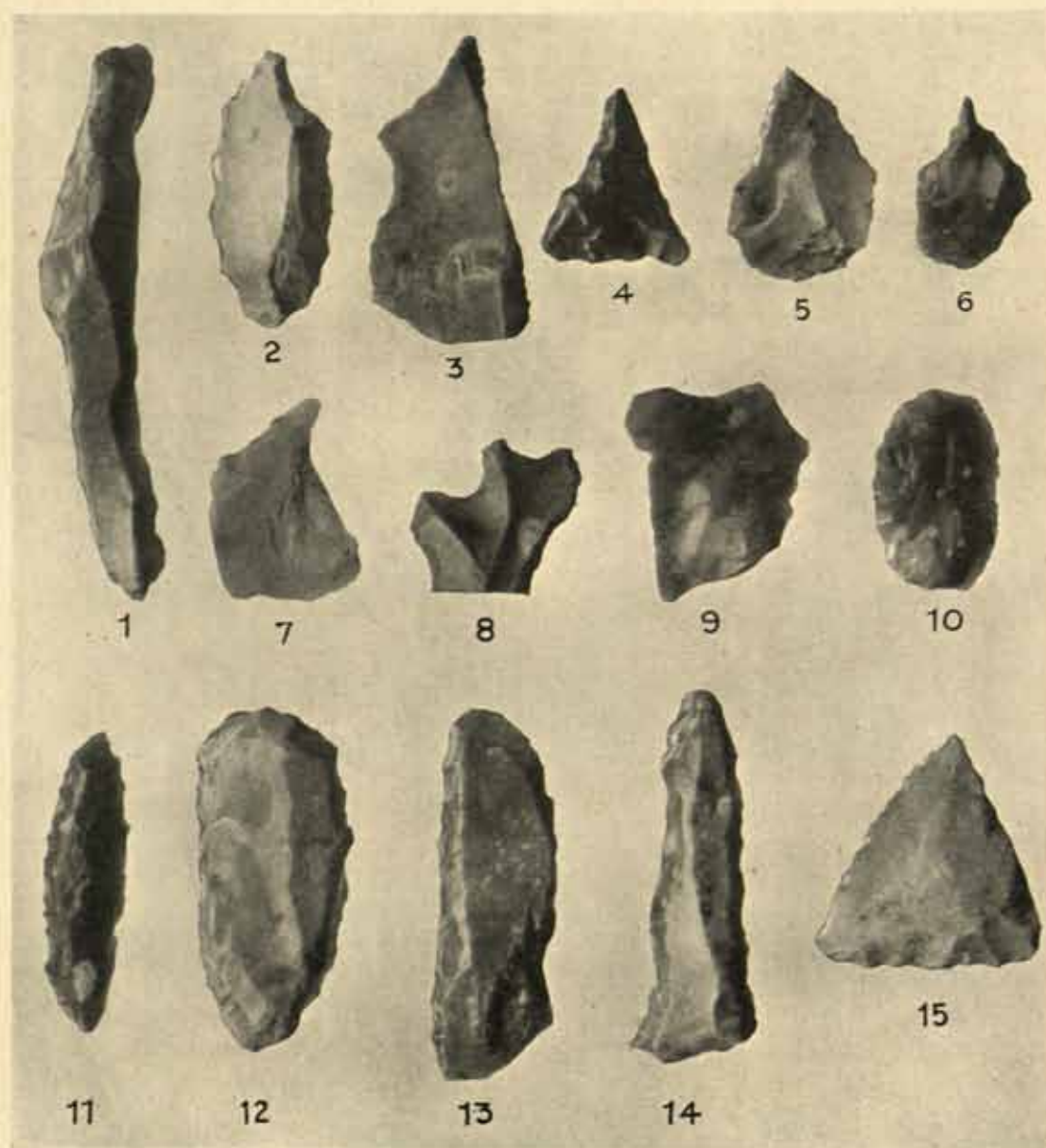


Fig. 7. Miscellaneous Flint Implements. (3.)

triangular implement, worked along two sides towards a point with the base split to a thin edge. The worked sides measure $1\frac{3}{8}$ inch in length and the base $1\frac{1}{4}$ inch. No. 11 is a beautifully shaped and worked implement of ornamental appearance, measuring $1\frac{3}{8}$ inch by $\frac{7}{16}$ inch by $\frac{3}{16}$ inch. One face is flat, the other rounded. It tapers with a curve to a point at both ends, giving it a willow-leaf outline. No. 10 is a thin ovoid implement, measuring $1\frac{1}{16}$ inch by $\frac{3}{4}$ inch, carefully worked all round. One face shows the bulb of percussion reduced by flaking. It might be a small knife. There are a small implement of chalcedony, almost round, measuring $\frac{9}{16}$ inch diameter, and a fine translucent piece of the same material flaked to a knife point, from knoll in the East field. A lozenge-shaped piece of dark coloured flint, measuring $1\frac{1}{2}$ inch by $1\frac{5}{16}$ inch by $\frac{5}{16}$ inch, is battered on the angles. In addition to the tools, many cores and lumps of worked flint have been found. Many of the cores are worked to a small size, showing that economy of this material was practised. The knife of pitchstone and other three fragments of this material are notable as proving the distance this glassy mineral was carried by prehistoric man, Arran being the probable source of supply. One fragment measures $1\frac{1}{2}$ inch by 1 inch by $\frac{1}{2}$ inch. Chalcedony is abundant in the soil.

In conclusion, I would like to say that there must be many similar sites to Moorpark in our land awaiting investigation. No one is in so good a position to do so as the farmer and the ploughman. They alone are able to search for relics in the course of their daily labour. It takes practically no time from their work. The eye catches the sparkle of the flint. A moment transfers it to the pocket, to be examined at leisure. I can testify that many a time after finding a fine specimen the toilsome day seemed to go better.

III.

SOME ANTIQUITIES IN STRATHFILLAN, PERTHSHIRE, CUPPED BOULDER NEAR HELENSBURGH, AND CROSS-SLABS IN GLEN FRUIN, DUMBARTONSHIRE. BY A. D. LACAILLE, F.S.A. SCOT.

ANTIQUITIES IN STRATHFILLAN.

During fishing expeditions in the Crianlarich district, my attention was drawn to some ancient sites which, after a study of the Ordnance Survey charts and careful examination, I feel are worth reporting. I was fortunate in getting the co-operation of Mr Gordon Place, proprietor of a portion of the ground, and of Mr Ludovic M'L. Mann, who visited many of the places in question and helped in the examination, elucidation, and surveying of them.

The best known site is the ruined chapel of St Fillan, connected with King Robert I. (Bruce) and referred to in the *Proc. Soc. Ant. Scot.*, vol. xii. pp. 122-82. The chapel is in a bad condition, with scarcely an architectural feature of any moment to be seen. Of the Priory buildings no vestige remains. The stones were used in the building of Kirkton Farm and a Secession Church, but this place of worship has disappeared. Placed in the centre of the rectangular building, and resting on a slab or flagstone 5 feet long and 18 inches broad, is a schistose boulder with a deeply cut-out heart-shaped cavity. The relic is a font, and was identified with rites connected with St Fillan. (See *Scotland in Early Christian Times*, first series, p. 192, Jos. Anderson.) There are lying near it fragments of a rotatory quern.

Immediately to the north of the chapel is the modern graveyard, which became disused some fifty years ago. It is a small square enclosure surrounding a circular mound, which looks like a Bronze Age burial cairn. Some of the graves are covered with a long slab, probably taken from the floor of the adjoining ruined chapel. On one slab I observed the sculpturing of three Latin crosses, the longer arm in each case placed along the longer axis of the slab. The crosses are graduated in size; the middle one being of intermediate dimensions. On the right of the largest are two shallow cup-shaped depressions (fig. 1).

Farther to the north is a spring with carefully built stone-work showing signs of great age. This is the old water supply of St Fillan's Priory, and is still known as the "Priest's Well."

To the south-east of the well, on the top of a pronounced natural

gravelly ridge, is an inconspicuous circular mound, apparently much worn down. It has every appearance of being the remains of a cairn.

About 200 yards east of Kirkton Farm is a small rectangular enclosure encompassed by a ruined walling called the "Priest's Garden." One or two stunted orchard trees grow within this desolate little patch.

Some 50 yards east of this is a grassy ridge, on the top of which is a mound, which does not appear to be natural, with a long, undoubtedly artificial hollow in its centre.

On the south side of a small stream on the alluvial plain between it and the river Fillan, and about 150 yards south of St Fillan's Chapel, is a small circular cairn, probably a burial-place of the Bronze Age, to which my attention was drawn by Mr J. Paterson, J.P., of Kirkton Farm. The cairn seems to be intact except for a slight excavation near the top. Mr Paterson, who has been tenant since 1869, has never heard of any excavation of the cairn, but he mentions that while ploughing on the south margin some slabs were disclosed.

About 1 mile to the west is the farmhouse, once the manse, of Auchtertyre. Due south of this place are the remains of a circular cairn called the "Mòd a Cheann Drochaid," the centre of which seems to have been entirely robbed of its rubble stones, which were perhaps used in building the now demolished clachan which adjoins it. The stones were again probably used in the modern steadings and field walls. The Mòd consists of a circle of large boulders which were apparently set round the margin of the cairn, and many of these are still in position, their weight hindering their removal for building purposes. As the plan (fig. 2) shows, the circle is raised over practically all its circumference, the eastern portion particularly. Turf at this part has grown so thickly as to knit the stones into a homogeneous mass. The cairn resembles somewhat the Clava and many other Scottish sepulchres.

It should be said that there are traces of an extension of the cairn due north for about 30 yards. It is not improbable here was once a Neolithic long cairn, and that the Bronze Age people disturbed the structure and erected a circular cairn at its south end. From the Mòd is to be seen a small circular cairn about 300 yards to the south-east.



Fig. 1. Cross-slab at St Fillan's Chapel. (1/2.)

It is in a field, and is a counterpart of that south of the Chapel of St Fillan. It has never been disturbed as far as can be ascertained.

Between the farms of Auchtertyre and Kirkton are traces of what are probably two cairns very much destroyed, but their precise formation is unrecognisable.

To the south-west of Auchtertyre and opposite Strathfillan Manse, at a bend in the River Fillan, is the Holy Pool, famous in connection

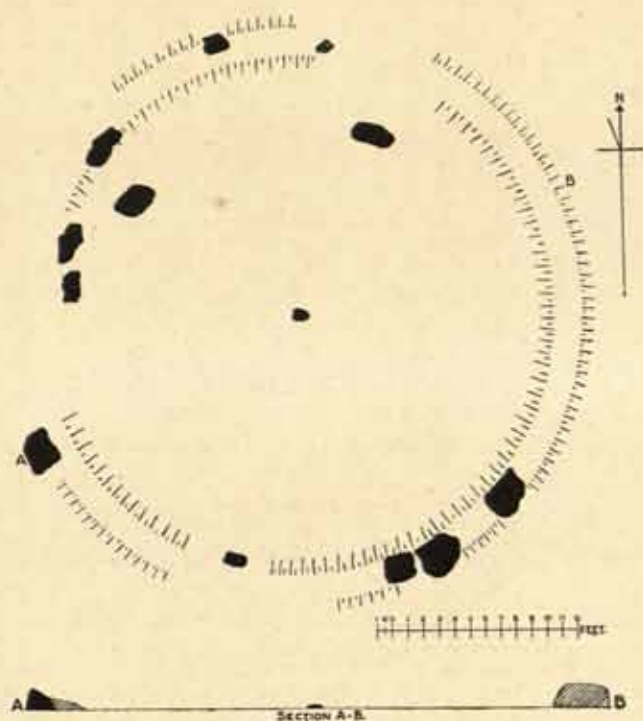


Fig. 2. Stone Circle, "Mòd a Cheann Drochaid," Strathfillan.

with the rites relating to St Fillan.¹ Insane persons, until the middle of last century, were bathed in the pool and thereafter taken to the chapel of St Fillan, where they were tied up all night to the font referred to. We are told that St Fillan's Bell (now in the National Museum, Edinburgh) was placed on the head of the patient for a few moments. The *New Statistical Account of Scotland*, 1843, vol. x. p. 1088, referring to these practices, states that the natives of the strath had long ceased to

¹ *Old Statistical Account of Scotland*, Parish of Killin; and Sir Daniel Wilson, LL.D., *Prehistoric Annals*, vol. ii. p. 278.

go to the Holy Pool, which still was visited by people who, in many instances, had travelled far. From an amusing paragraph in Mr Jas. M. Mackinlay's book, *Folklore of Scottish Lochs and Springs*, p. 126, we learn that "a farmer who had a mad bull thought that if the sacred water could heal human ills it would be efficacious also in the case of the lower animals. So he plunged the infuriated beast into the stream. What was the effect on the bull we do not know, but since then the virtue has departed from the water. . . . Strathfillan kept up its fame for over a thousand years."

Going back towards Crianlarich, one passes on the south side of the road, on the high ground after Euich Farm, a dolmen-like formation of rock. It is, however, undoubtedly of natural origin, caused by the displacement of sections of a huge schistose boulder, parts of which, becoming fractured, have slipped downwards and created the dolmen-like structure of two base stones with a large slab bridging them.

In her excellent little guide to Crianlarich, Mrs Place of Inverherive describes this rock as the "Sentry-box," for here was posted, in the days of clan feuds, a man who, from this eminence, could command a wide view of the strath and of the approach of an enemy.¹

Fifty yards to the north of it, between the road and the Callander and Oban Railway, is a small grassy circular plateau with roughly built periphery; its precise age and character are indeterminable until excavated.

About 400 yards farther to the north, and lying in a picturesque grassy hollow, is a circular setting of large, irregularly shaped prostrate slabs of native rock, 60 feet in diameter. It seems to belong to the older category of stone circles like Arbor Low in Derbyshire and Avebury in Wilts.

Again to the north is a natural knoll, the north side of which falls steeply towards the River Fillan. Quite close to the stream is an irregularly shaped and much fractured boulder, on the slanting east face of which five large cup-shaped hollows were detected.

To the east of the circle, and about 300 yards from it in a most conspicuous position on the top of a hill, is a quadrate boulder also of the native Highland schist. At a distance this landmark looks like a flat-roofed hut. On the vertical west face we discovered six large cup-marks.

¹ "Euich," Mrs Place tells me, is a corruption of Gaelic terms, meaning the "place of shouting," referring to the sentry's shouts through the aperture bridged over by the slab at the "Sentry-box." Such a call could, it appears, be heard over a wide area. The farm thus takes its name from this site.

SCULPTURED BOULDER NEAR HELENSBURGH.

The boulder is situated at an altitude of some 450 feet above sea-level, a hundred yards south-east of the gate on the "Highlandman's Road" (a track leading from Row to Glen Fruin), a short distance east of the upper part of the Ardencaple Wood and close to the Glennan Burn. It is about $\frac{1}{2}$ mile north of the West Highland Railway, on the lands of Drumfad Farm, on the Luss estates of Sir Iain Colquhoun, Bart.

The boulder, presumably an ice-carried one, is irregularly quadrate in form, and is composed of very hard Highland schist; consequently many of the numerous sculpturings on its surface, which is about 5 feet from the ground, are well preserved. It is of such size—48 feet in girth—as to make it a most prominent landmark. It occupies a position from which an extensive view can be had to the east and south. The prospect to the north is shut out by rising ground known as the Mains Hill, while to the west it is obscured by the Ardencaple Wood.

It appears to have been the intention of a whilom holder of the land to break up the boulder for the purpose of using the stone so obtained in the building of the marches; to this end two holes were drilled in the horizontal surface, and it was rent into four unequal parts. The outline of the only drill-hole used may be clearly traced on the inside of three fractured sides. The destructive intention was apparently abandoned, as the boulder resisted too well. Doubtless, as the first attempt to break up the rock completely failed, it was deemed futile to make use of material which could only be obtained with great difficulty.

The date 1732 is deeply carved on the edge of the north side.

The shattering of the boulder has hindered a ready survey of the scheme of cups, rings, and other markings. Under the guidance of Mr Ludovic M'L. Mann this has been restored as shown (fig. 3).

SITE OF ST BRIDE'S CHAPEL, GLEN FRUIN, DUMBARTONSHIRE.

I visited the site of St Bride's Chapel last summer. No vestige of a building remains, but the site is apparently a large circular cairn now occupied by Glen Fruin School.

Near the door of the schoolhouse, within the garden and close to the road, is an erect slab 2 feet 8 inches in height, 16 inches wide and 9 inches thick. On it is sculptured a fine raised cross¹ of the Keills type in a fair

¹ *The Early Christian Monuments of Scotland*, p. 31, No. 11.

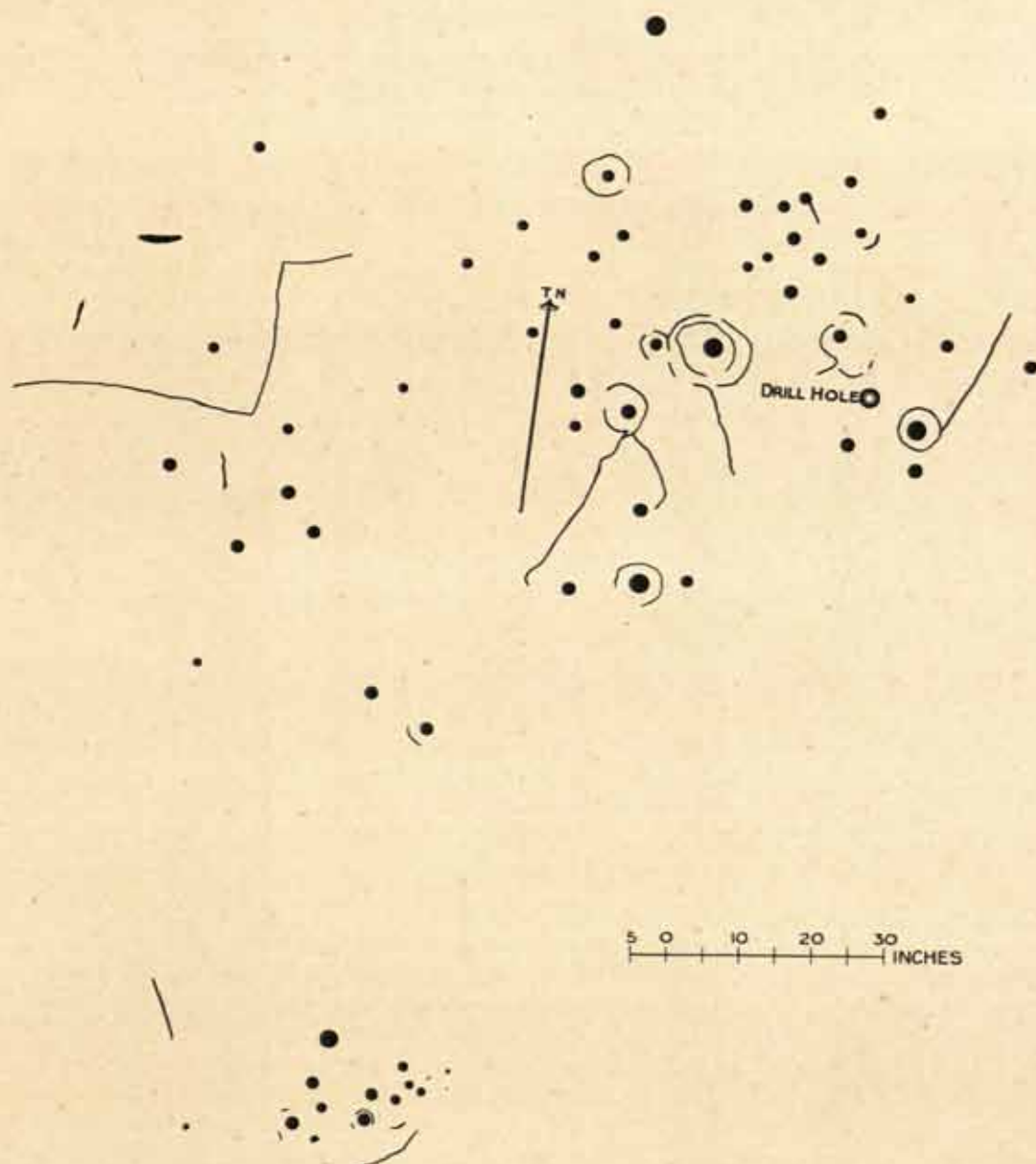


Fig. 3. Cup- and Ring-marked Boulder at Drumfad, near Helensburgh. (1/4)

state of preservation. The edge of the stone possessed flat-band moulding, but save for the top and an inch or so at the side this has been destroyed.

I was told by Mrs Willan, the schoolmistress, that the stone was discovered some years ago when foundations were being dug for a washing-house.

The illustration (fig. 4) is reproduced from a rubbing.



Fig. 4. Cross-slab at St Bride's Chapel. (17.)

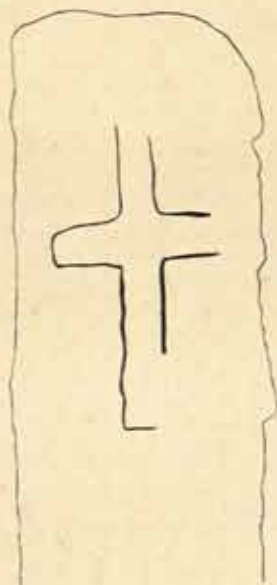


Fig. 5. Cross-slab at Ballivoulin. (17.)

INCISED LATIN CROSS ON ERECT SLAB AT BALLIVOULIN, GLEN FRUIN, DUMBARTONSHIRE.

Situated in a field a little to the south-east of Ballivoulin Farm, and about 50 yards from the road on the north side, is a small eminence, circular in shape and obviously artificial. Two stones, prominent objects on the south side of this knoll, attracted my attention.

The larger of the two is a hog-backed boulder, but no sculpturings could be detected thereon. The other, of schist, is most interesting, as it is an erect slab 2 feet 6 inches by 13 inches, and varying in thickness from 7 inches at the top to 9 inches at the base. A Latin cross is incised on the south face, and a rubbing was made of the sculpturing (fig. 5). Unfortunately, the stone is so badly weathered that the carving is not very clear. In fact, I fear that in the course of a few years it will have disappeared, as the surface is peeling off.

IV.

AN ACCOUNT OF SEVERAL ANTIQUITIES IN GAIRLOCH PARISH,
ROSS-SHIRE. BY WILLIAM THOMSON, F.S.A. SCOT.

DUN ON CREAG AN FHAMHAIR, GAIRLOCH.

No mention of Creag an Fhamhair—the Rock of the Giant—or the ruins on its summit is to be found in any book on Gairloch, yet one would have thought its suggestive name, striking appearance, and picturesqueness would have attracted attention, and led to some record having been made of it before the hand of the road-making vandal had reduced it well-nigh to the level of the surrounding ground. No history attaches to it, though local tradition makes it the scene of battles in the far distant past, doubtless between the native races and insurgent Norsemen, the latter having given Kerrysdale, in which the fort (fig. 1) is situated, its name.

Creag an Fhamhair, a mass of Hebridean gneiss, projects westward from the adjacent hills to the River Kerry, its bold cliffs, nearly perpendicular to west and north, forming a striking object in the landscape. Its summit is almost level and grass covered, rising about 100 feet above the Kerry. Here the Fingalians of old found a shelter, and, by continuing the bulwark Nature had given them on west and north with an artificial structure round east and south, enclosed a space of 480 square yards wherein to erect their huts and shelters.

At the west end next the river the cliff drops sheer for 50 feet, and a precipitous face to the north, of like height, makes the place well-nigh impregnable from these sides. Even on the summit Nature has lent her aid, for a projecting ridge of rock, running from points 6 to 7 on plan, renders wall-building almost unnecessary there. Before the road to Gairloch by the side of the Kerry and between that river and the western face of the headland was constructed over seventy years ago, the walls of the fort are stated to have been "higher than a man," and persons still living remember when they were from five to six feet high; but since that time, and indeed till quite recently, the place has been used as a quarry for material for the highways.

From the west cliff front to the east or rear—points 4 to 6 on plan—the distance is 100 feet, and from north to south—points 6 to 10—103 feet. The entrance to the fort has been between points 1 and 2, and the extra large boulders there would doubtless be used to give additional strength to this part. A continuation of the south wall, shown at point 9, has

formed a protection for the doorway. From the latter, the shaded lines indicate a slight hollow which continues to point 13, where, on digging, the soil was found to be brown earth, then sand, and lastly, soft clay, at a depth of 30 inches. Water gathered here in the course of a day to a



Fig. 1. Dun on Creag an Fhamhair, Gairloch.

depth of nearly 1 foot, but whether from a spring or merely surface draining was not ascertained. In the centre of the enclosed space is a projection of rock and stones, and at point 7 is a flat rock surface which may have been a hearth.

The walls were 6 feet thick and built of rough, undressed stones, gathered in the vicinity and piled up without mortar of any kind. The largest stones formed the outer and inner faces of the walls. From

point 7 the wall is roughly semicircular, and from there to point 3 is 120 feet long. The outside line of the wall is clearly traceable, and at the rear the height, externally, is in places 2 feet. In the course of demolition many large stones from the walls have fallen down the steep slopes to the east and rear and lodged at various points. On this side the ground dips rapidly to a marshy hollow, and rises again beyond to another and higher bluff about 100 yards distant.

At a distance of 20 feet, or thereby, down the rear slope there are evidences of an outwork similar in structure to the wall of the fort above. This outer wall, or rampart, can be traced in the bracken and heather for a length of 60 feet.

Strategically, Creag an Fhamhair occupied a very strong position. During the period of its occupancy marshes would extend on every side; it was protected by the River Kerry in front on the west, and by the Allt Dhonnachaidh, a considerable stream, on the immediate north. It commanded the passes of Kerry and Shildaig, the only avenues of access from sea or shore.

Professor Watson, in his description of the circular forts in Lorn and Northern Perthshire (*Proceedings*, vol. xlix. p. 17), some of which appear similar to that under consideration, states that they were occupied by "a pastoral and agricultural people," and further, that "every one examined is near a pass or passes." The latter fact is characteristic of Creag an Fhamhair, and agricultural land would in all probability exist even then on the area to the north, covered presently by the fields of Kerrysdale Farm.

OBHAIR LATHA (THE DAY'S WORK).

At the north-western end of Druim Obhair Latha, on a truncated cone of rock, 120 feet above the Flowerdale Burn, stands the curious ruin called Obhair Latha, meaning "The Day's Work." The sides of the eminence on which it stands drop steeply to the banks of the stream, on the opposite side of which the rocky slopes rise again to the cliffs of Craig a Chait, behind Flowerdale House, the seat of Sir Kenneth Mackenzie, Bart., of Gairloch. Through the screen of foliage you look away beyond Longa Island on the north and Badachro on the south side of the Gairloch. Immediately below is the landlocked Charlestown Bay, with its pier and some few boats near by, and the old inn, now the post office, at the base of the hill on which Obhair Latha stands.

Beyond the persistent tradition that it was built in one day for urgent defensive purposes against some enemy coming from seaward, there is no history attached to the ruin, which is known to few and is not

recorded in any history of Gairloch. Yet it has obviously an intimate connection with the troublous times when the Macbeaths, M'Leods, and Mackenzies were struggling for the mastery in this wildly beautiful country.

The ruin consists of four columns of rude, strong masonry, each 3 feet 4 inches wide by 5 feet 6 inches thick, separated one from the other by narrow openings, each 1 foot 10 inches wide (fig. 2). These apertures, measured from the ground level, are 6 feet high; they pierce the wall from front to back, and have heavy lintels, slabs of undressed schist 4 feet



Fig. 2. Obhair Latha (The Day's Work), Gairloch.

long and 5 to 6 inches thick. Only one aperture remains complete, generations of Gairloch boys having reduced the remains to their present condition. The building is finished at both ends—side or back walls never existed, though a wooden erection may have been built on the landward side. It is definitely stated that the wall was continued upwards, sloping, pyramid fashion, to a central apex. The highest part is now 9 feet above ground level at the south-west end. Some very large and heavy stones have been used in its construction, the interstices packed with slaty fragments. No mortar has been employed. It dates, possibly, from the fifteenth or sixteenth century.

Beyond Charlestown Bay below is the Dun of Gairloch, round which circled the fighting between the Macbeaths, M'Leods, and Mackenzies.

About the year 1480, in consequence of a terrible crime committed by the M'Leods, the King granted a commission of fire and sword, directing the Mackenzies to exterminate the M'Leods. The latter were finally driven out of Gairloch about 1569, but in the interval between 1480 and the latter date they made several attempts to regain their lost territory. It may be that Obhair Latha was built by the M'Leods in their slow retreat before the pressure of the Mackenzies, or by the latter to enable a watch to be kept seaward, to guard against any sudden attack by the M'Leods.

In his admirable *History of Gairloch*, Mr J. H. Dixon tells (chap. xii. p. 46) of one such effort on the part of the expelled M'Leods prior to 1569. On this occasion they had ventured into Charlestown Bay in their biorlinns, but were foiled and defeated by the marvellous archery of a celebrated Macrae called Donald Odhar. Donald is made to discharge his arrows with deadly precision from Craig a Chait, behind Flowerdale House, but there is a strong presumption that he may have been concealed in the recesses of Obhair Latha. From the secure protection of its massive walls he could with safety pick off the M'Leods on their warships below. The range was close, the archer well concealed, and the incident would agree with the tradition which clings to Obhair Latha.

"AN DUN," THE VITRIFIED FORT OF GAIRLOCH.

In his *History of Gairloch*, p. 98, Mr J. H. Dixon states that:—"The only vitrified fort in Gairloch stood on the rocky eminence near the volunteer targets, at the south-west end of the largest sandy beach at Gairloch. Slight traces of vitrification are said to be still found." And again:—"The stronghold most frequently mentioned in the traditions of the country is the Dun or Castle of Gairloch. It occupied the same site as the vitrified fort just referred to. Probably it was more a fortification than a castle. Some of the low banks or lines of stones on the rocky eminence are said to be the ruins of the castle walls. This dun is said to have been a stronghold of the Macbeaths, and subsequently of the M'Leods."

The presence of the M'Leods in Gairloch, according to the same careful narrator, may date back to the time of the Norsemen, from whom they were descended, while the Macbeaths came from Assynt in Sutherland, probably in the thirteenth century. A struggle for the mastery between these clans resulted in favour of the M'Leods, and, in 1430, King James I. granted the lands of "Gerloch" to Nele Nelesoun "for homage and service rendered." With this authority in his possession, "Nele," the son of Neil M'Leod, took steps to drive the Macbeaths from their three Gairloch strongholds, including the dun.

Fifty years later, for a foul murder perpetrated by two of the M'Leods, King James III. gave Hector Roy Mackenzie a commission of fire and sword for the extermination of the M'Leods, and in 1494 this same Roy received a grant of Gairloch by charter from the Crown. This was followed by a new charter under the Great Seal, dated 8th April 1513; but Hector Roy never succeeded in driving out the M'Leods, whose final expulsion took place between 1569 and the end of the century, after which the Mackenzies held, and still hold, the lands of



Fig. 3. Vitrified Fort, "An Dun," Gairloch, from the south-west.

Gairloch. Such, very briefly, is an outline of the history circling round the Gairloch Dun.

The peninsula on which the ruins are found is a mass of Cambrian gneiss, projecting into the Gairloch in an almost north-westerly direction from the southern end of the beautiful sandy beach in front of the golf-course (fig. 3). Behind the golf-course, nearly opposite the centre of the beach, stands the Established Church, and on the golf-links, in front of it, is a remarkably symmetrical, oval hollow, covered with soft, green turf. In this hollow, which at other times serves as a bunker for the disciples of Braid and Vardon, the Gairloch Communion Services are still held annually. But legend has it that Fingal himself scooped out the depression for a bed where his white cow might calve.

Thus it is still called *Leabaidh na Ba Baine*, or "the bed of the white cow," and Fingalian lore comes, therefore, very near the site of the ancient dun.

The peninsula (fig. 4) is from 120 to 130 yards long, and from 33 yards at the landward end to 70 or 80 yards broad at the seaward extremity. Divided into two unequal parts by a geological fault, forming a gully from 10 to 15 feet wide, these are named respectively *Dun a Muigh* (the outer dun) and *Dun a Stigh* (the inner dun).

The latter is precipitous on every side, and accessible only from the south. The figures 1, 2, 3, and 4 on plan mark lines of walls enclosing a space of 270 square yards or thereby. A narrow chasm or fissure—in line with the flagstaff on photo—now choked with debris from the ruins of the walls, separates the first from the second enclosure, indicated by the figures 5, 6, 7, and 8. This, undoubtedly, has been the principal stronghold, and is roughly oval in shape. At point 6 the grassy vallum is 6 feet high, and from 3 to 5 feet elsewhere, these measurements applying to the inner sides. Here the enclosed area runs to 370 square yards. One or two fragments of dressed *Torridon Red Sandstone* were noted on this site, but local vandals have removed practically all the superstructure, the last addition to the Parish Church being to a large extent built of material taken from this fort. There are indications of an outer line of defence on the west seaward side. To north and east externally, the mounds drop steeply to margins of cliffs and gully. Everywhere on these slopes stones show through the grass, and, since sand has accumulated to the depth of several feet in places, excavation would, in all likelihood, reveal considerable masses of wall.

Proceeding outward, the edge of the gully nearest the central fort has been surmounted by a wall throughout its whole length, and, before leaving *Dun a Stigh*, it is important to note that a spring of clear water was detected, and is marked on the plan.

To facilitate communication between the two duns, a bridge of some description, probably of wood and easily withdrawn, must have extended across the gully. Nowadays the cliffs on the southern side are 10 feet high and 24 feet on the opposite side, but accumulated debris has reduced the original depth or height. Encircling the whole grass-covered surface of the outer dun are foundations of walls, enclosing a space exceeding 1000 square yards. Covered with soft verdure and with a spring, the water from which runs out among the rocks at the north-eastern extremity, this part of the dun may have been used as pasture-ground. The course followed by the mural lines is shown by figures 12, 13, 14, and 15.

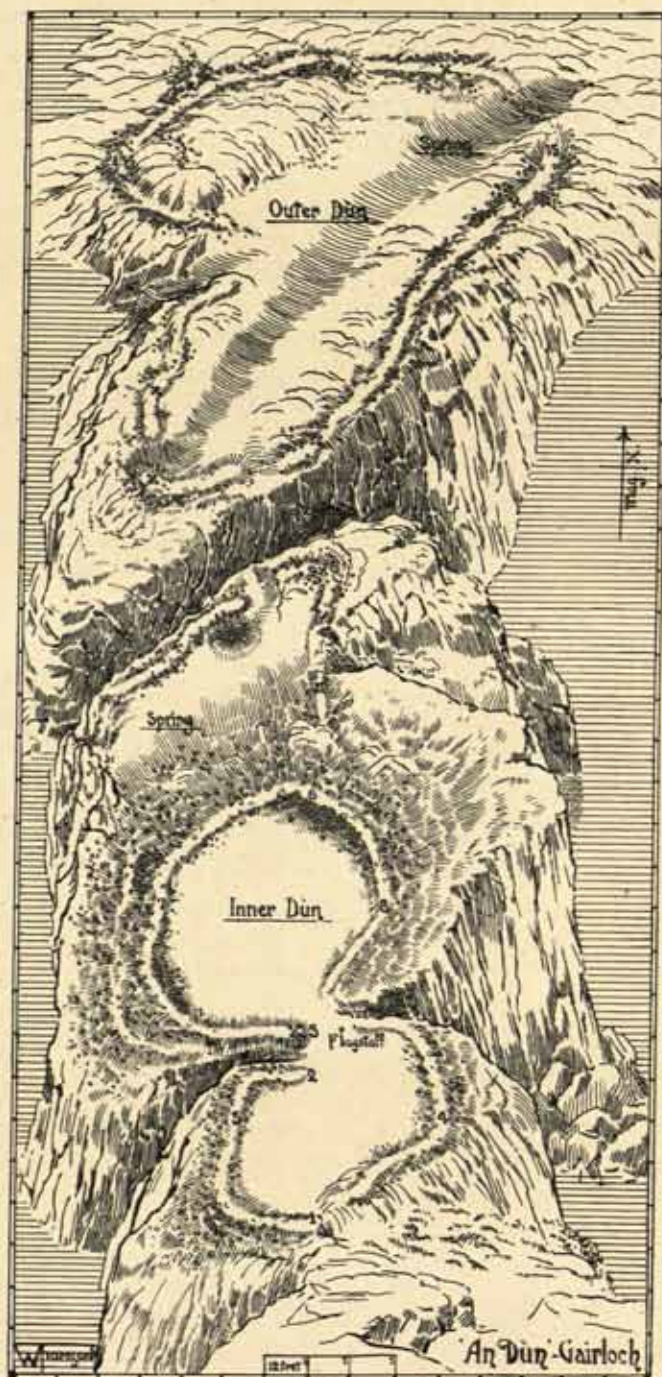


Fig. 4. Vitrified Fort, "An Dun," Gairloch.

Careful observation proves that the whole of this spit of wind-swept rock was an encampment and a stronghold for many centuries. Evidence of vitrification is observable everywhere, and clusters of partly fused stones were found at a dozen different places (marked by crosses on plan). A solid mass about 5 feet long, 5 feet high, and 3 feet thick remains *in situ* and exposed at point 5, its situation showing that it had formed an integral part of the walling of the central fort.

The stone used was fragments of the Torridon Red Sandstone and breccia, both of which form the cliffs at the northern end of the sandy beach. The pieces are small, and lie scattered about in profusion all along the boundary lines—an indication that here, as elsewhere, the fusing process was neither perfect nor thorough. On the outer dun, the walls were carried almost to high-tide mark on flat-topped rocks but little above sea-level, and within reach of the waves when strong winds prevailed.

The examination and measurements showed a total length of over 1000 feet of wall foundations, all of which appeared to have been subjected to vitrifying processes. Superimposed on these, in the middle fort, was a structure non-vitrified, and this close association of earlier and later buildings offers a tempting field for exploration and excavation. The busy mole, driving his tunnels through the soft, sandy soil within the chief enclosure, had thrown up dozens of whelk shells, obviously buried for a prolonged period, which were probably one item of the fare of the first occupants of the Gairloch Dun. In their huts they braved the storms of centuries, and lived and moved and had their being till the fierce Norsemen swept them away and took possession. Local nomenclature demonstrates the presence of Norse rovers in this neighbourhood for many generations, till they in turn were displaced by Macbeaths, M'Leods, and Mackenzies.

The quotations given from Mr Dixon's *History of Gairloch* are the only references to vitrification on the site described and planned. That it belongs to the vitrified forts in Scotland is established, and the Dun of Gairloch should be included in the ever-lengthening list of these remarkable centres of the communal life of the early inhabitants of Caledonia, which, discovered first by John Williams, and described by him in 1777, have ever since proved intensely interesting to the antiquary and archæologist.

MONDAY, 11th February 1924.

SIR ANDREW N. AGNEW, BART., Vice-President,
in the Chair.

On the recommendation of the Council there was elected a Corresponding Member:—

JAMES SMITH, Mumrills, Falkirk.

A Ballot having been taken, the following were elected Fellows:—

JOHN COOK, W.S., 61 Castle Street.

HUGH DAVIDSON, Braedale, Lanark.

Major ROBERT E. DOUGLAS, Cavers, 114 Polwarth Terrace.

STAIR AGNEW GILLON, Advocate, Solicitor of Inland Revenue, 14 Carlton Terrace.

Sir ARCHIBALD BUCHAN HEPBURN, Bart., D.L., Smeaton-Hepburn, Prestonkirk, East Lothian.

R. LIONEL PALGRAVE JOWITT, Chilland, near Winchester.

JAMES PATON, 80 High Street, Lanark.

Sir H. ARTHUR ROSE, 23 Ainslie Place.

HARRY J. YOUNGER, Harmeny, Balerno, Midlothian.

There was exhibited by THE TRUSTEES of the late The Right Honourable CAROLINE, COUNTESS DOWAGER OF SEAFIELD.

Collection of Relics found at Urquhart Castle, Inverness-shire, by H.M. Office of Works, during excavations at the castle. These will be described in a future communication to the Society.

The following Donations to the Museum were intimated and thanks voted to the Donors:—

(1) By The Right Hon. THE BARONESS STRATHCONA AND MOUNT ROYAL.

Bronze Pin, $3\frac{1}{16}$ inches in length, with a vertically flat round head and slight projections on both sides below; found in a rabbit hole a short distance from Carn nan Bharraich, Oronsay, Argyll, by Mr Malcolm McNeill, Farmer.

(2) By Miss MAXWELL, House of Elrig, Portwilliam, Wigtownshire.
Rim Fragment and several Wall Fragments of a very coarse clay vessel from Glenluce Sands.

(3) By JOHN H. DIXON, F.S.A.Scot.

Highland Brooch of Silver, $3\frac{5}{8}$ inches in diameter, given by Alexander M'Kenzie of Letterewe to his nurse, having wreaths, a thistle, and a rose incised on the front, and on the back the inscription—THE GIFT OF ALEX^r M'KENZIE TO MARY M'PHAIL HIS NURSE 1760, and the maker's stamp L. & R.

(4) By Major The Most Hon. THE MARQUESS OF LINLITHGOW, F.S.A.Scot., on behalf of the 19th (Lothians and Border) Armoured Car Company.

The Dr Caverhill Collection of Uniforms, etc.

(5) By GEORGE MACDONALD, C.B., F.B.A., LL.D., D.Litt., F.S.A.Scot.
Small Collection of Relics from Ayrshire :—

Axe of greenstone, imperfect at the butt end, measuring $6\frac{1}{2}$ inches long and 3 inches broad, found in a streamlet at the mouth of a drain near Knockgerran, Girvan; two Stone Whorls, $1\frac{5}{8}$ inch and $1\frac{1}{8}$ inch in diameter, and one made from a shard of yellow glazed pottery, $2\frac{1}{8}$ inches in diameter, found on Knockgerran; Stone Whorl, 1 inch in diameter, found near the River Annick, Dreghorn.

Hammer-stone, abraded at both ends, measuring $4\frac{9}{16}$ inches by $3\frac{1}{2}$ inches by $2\frac{1}{8}$ inches; Oval Waterworn Stone with perforation widely countersunk from both sides, measuring $2\frac{7}{8}$ inches by $2\frac{1}{4}$ inches by $\frac{1}{16}$ inch; Hone or Sharpening-stone, $5\frac{1}{4}$ inches in length, of spatulate form, being made from a waterworn stone naturally pointed at one end; the broad part is imperfect, and shows signs of polishing on the face and back; Bronze Flanged Axe or Palstave, measuring $6\frac{1}{8}$ inches in length and $2\frac{1}{8}$ inches across the cutting edge, having in front of the stop, on both sides, a small semi-elliptical moulding with a central rib, extending towards the cutting edge—exact localities unknown.

Barbed Arrow-head of yellow flint, $\frac{7}{8}$ inch long by $\frac{1}{16}$ inch broad, and a Flint Flake, $1\frac{9}{16}$ inch long, with slight chipping on one side; from Priesthill, Muirkirk.

(6) By WILLIAM BROOK, F.S.A.Scot.

Silver Soup Spoon, $9\frac{1}{4}$ inches long, weight, 2 oz. 0 dwt. 20 grs., of Old English type, with a pointed bowl, bearing the hall-marks of Perth in

four stamps—E.W., a tree in an oval panel, S., and a double-headed eagle with spread wings.

The following Donations of Books to the Library were intimated:—

(1) By HIS MAJESTY'S GOVERNMENT.

Calendar of Treasury Books, 1685-1689. Vol. viii. Parts 1 and 2.

(2) By GEORGE MACDONALD, C.B., LL.D., F.S.A.Scot.

Birrenswark: Ein britannisches Numantia. Von Adolf Schulten. (Neue Jahrbücher für das klassische Altertum Geschichte und Deutsche Literatur und für Pädagogik. Herausgegeben von Johannes Ilberg und Paul Cauer. 1914.)

(3) By Sir BRUCE GORDON-SETON, Bart., F.S.A.Scot.

Ancient Man in Britain. By Donald A. Mackenzie.

(4) By GEORGE F. BLACK, Ph.D., Corresponding Member.

A List of Works relating to Lycanthropy. By the Donor.

Druids and Druidism: A List of References. By the Donor.

Amber and its Origin. By the Donor.

Romani and Dard. By the Donor.

American Gypsies. By Albert Thomas Sinclair. Edited by the Donor.

Catalogue of a Collection of Gallo-Roman Antiquities belonging to J. Pierpont Morgan. Compiled by Seymour de Ricci.

Catalogue of a Collection of Germanic Antiquities belonging to J. Pierpont Morgan. Compiled by Seymour de Ricci.

Catalogue of a Collection of Merovingian Antiquities belonging to J. Pierpont Morgan. Compiled by Seymour de Ricci.

(5) By JAMES W. ALLAN, M.B., C.M., F.S.A.Scot., the Author.

On the Use of Stimulants, Narcotics, and Intoxicants among Uncivilised Peoples.

(6) By the Rev. F. HARRISON, M.A., F.S.A., F.S.A.Scot., the Author.
The Bedern Chapel, York.

(7) By THE DIRECTOR, National Museum of Wales.
A Short Guide to the Collections.

The following Communications were read:—

I.

ON TWO BRONZE SPOONS FROM AN EARLY IRON AGE GRAVE NEAR BURNMOUTH, BERWICKSHIRE. BY JAMES HEWAT CRAW, F.S.A. SCOT. WITH A REPORT ON THE SKELETON FOUND THEREIN, BY ARTHUR ROBINSON, M.D., PROFESSOR OF ANATOMY IN THE UNIVERSITY OF EDINBURGH.

On 26th July 1923 there was exposed at the edge of a quarry at Catch-a-Penny, near Burnmouth, Berwickshire, an Early Iron Age burial which proved to be of more than usual interest.

The quarry lies close to the right, or south side, of the main road from Edinburgh to Berwick, and the site of the grave is about 1100 yards south-east of Burnmouth railway station and 50 yards east-north-east of Catch-a-Penny farmhouse. The elevation is almost 400 feet above sea-level, the grave being placed on ground sloping gently to the north, some 15 yards from the edge of a much steeper slope.

The grave, which lay east-north-east, was 5 feet 7 inches long; at the middle its width was 30 inches, contracted to 27 near the east end or head, and to 22 near the foot; the depth was 20 inches. It was unpaved, and had been built with small boulders in two or three irregular courses. The corners were rounded except that to the north-east, which was rectangular. Four slabs of red and grey sandstone, brought apparently from the shore—fully a quarter of a mile to the north—had been used as covers, any interspaces being filled with smaller fragments. The covers lay at a depth of 27 inches beneath the surface of the ground.

In the grave, and partially covered with infiltrated soil, was the skeleton of a man (fig. 1) of more than average stature, apparently in the prime of life. The full report on the bones by Professor Robinson is appended. The body had been placed on its right side with the head to the east-north-east; the knees were slightly flexed, and the hands were in front of the breast.¹

Between the hands and the skull lay, within a small area, an iron knife, two bronze spoons, the jaws and other bones of a young pig, several fragments of coal, and a small piece of wood, probably part of the handle of the knife. The bones of young pigs have previously been

¹ For the completeness of the record I am indebted to the finder, Mr James Wood, Coldingham, who left the grave entirely undisturbed as soon as its nature was revealed, and to Mr Robert Dunn, Edington Hill, whose telegram enabled me to reach the spot with a minimum of delay.

found in Yorkshire both in Bronze Age burials and in those of the Early Iron Age.¹

The knife (fig. 2), which is much corroded and appears to have the

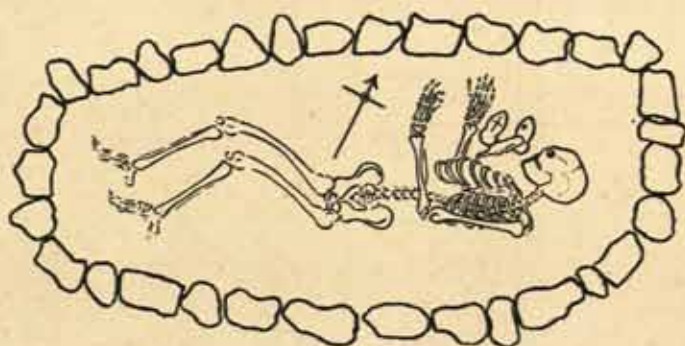


Fig. 1. Grave at Burnmouth.

end broken off, measures $7\frac{1}{4}$ inches, the blade being 5 inches and the tang $2\frac{1}{4}$ inches. The blade is $1\frac{3}{8}$ inch broad and has a back-rib about $\frac{1}{2}$ inch in width, as if to suit the knife for use with a hammer.

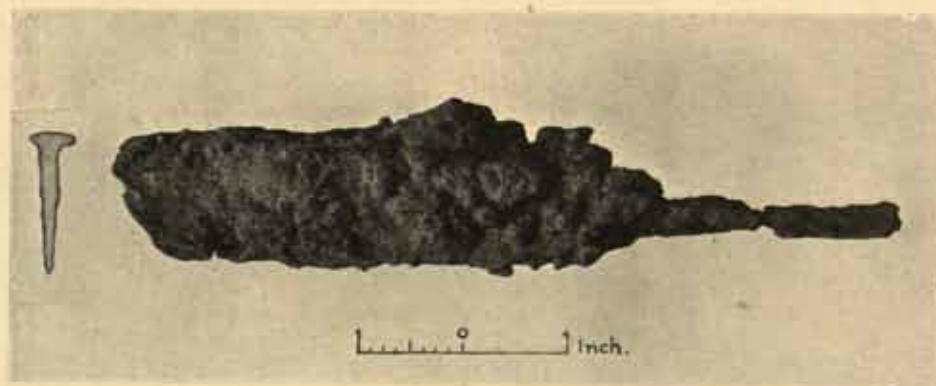


Fig. 2. Iron Knife from Burnmouth.

The spoons (fig. 3), which measure $4\frac{1}{2}$ inches by $2\frac{3}{8}$ inches, were found a few inches apart. The blade of the knife lay partly on that which was nearer the skull, staining it with rust. This spoon has a small perforation near the right side of the bowl, as usually figured, handle uppermost. The other spoon bears on the bowl an engraved cross. On the handle

¹ *British Museum Guide to Early Iron Age Antiquities*, and Mortimer's *Forty Years' Researches in the Burial Mounds of East Yorkshire*.

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of the perforated spoon can be seen traces of an engraved design consisting of narrow spiral bands with transverse hatched lines. No ornamentation is now traceable on the spoon bearing the cross. Compared with examples from the south of England, the spoons are flatter and of lighter construction; the ornamentation is comparatively poor in design and execution.

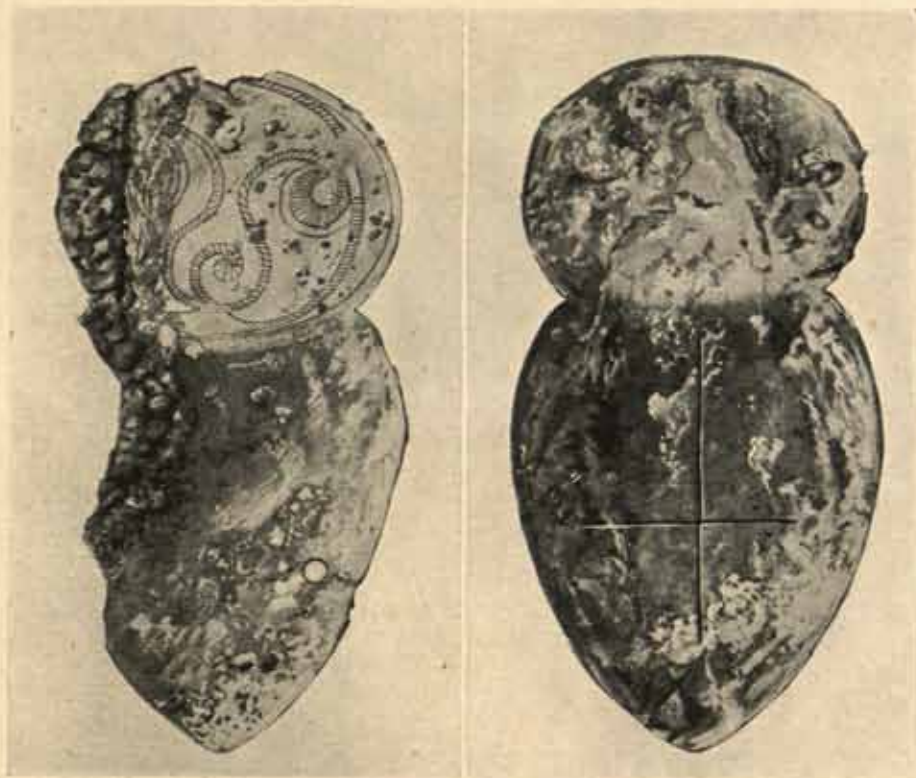


Fig. 3. Bronze Spoons from Burnmouth. ($\frac{1}{2}$.)

Spoons of this type are of great rarity, and have not previously been found in Scotland. Dr Joseph Anderson, writing over fifty years ago,¹ said of them: "Though no specimens have yet been met with in Scotland, I notice them here because their decoration is so nearly related to that of the Scottish school." They belong to a period shortly prior to the commencement of our era. Of 21 examples now on record, 4 come from Wales, 8 from England, 2 from Scotland, 5 from Ireland,

¹ *Scotland in Pagan Times: The Iron Age*, p. 134.

and 2 from France. The accompanying table sets out the details of the various discoveries, and the spoons are shown in fig. 4.¹ They usually occur in pairs, there being 9 pairs recorded, and 3 odd spoons. They have been made in a mould, and, though similar, are rarely both from the same mould. One of each pair has a small perforation, which, with one exception, is always placed close to the right edge of the bowl; the other bears on the bowl an engraved cross. In the French pair one spoon is plain, while the other bears both the perforation and the cross, the former being in the centre of the bowl instead of at the edge. The use or significance of these features has not been satisfactorily explained; the Eucharistic theory may now be dismissed, as the spoons are known to belong to pre-Christian times. Formerly designated "spoon-like objects," there can now be little doubt that they were actually spoons. The perforation suggests use as a strainer, but further discoveries must be awaited to solve the mystery.²

The Welsh spoons and those from the south of England are of the best workmanship, with embossed concentric or curvilinear designs on the handles, the reverses of which are in some cases engraved with curvilinear designs. In one Welsh pair (1 and 2) and in one English spoon (5) the junction of the bowl with the circular handle is strengthened by wide lateral wings. That this junction was a weak part is shown by a small ornamented plate riveted on the back of a spoon found in London (8); the only other evidence of repair is a small gold plug inserted in one of the Cardigan pair (2). The spoons from the north of England, Scotland, and Ireland have engraved designs on the handles and are not embossed; the bowls are less circular than those from the south, the Irish spoons being specially elongated. In the Irish and Westmorland spoons the cross radiates from a small engraved circle; this might suggest an origin from a spoon with a central perforation similar to the French spoon, but the design is probably purely ornamental.

With regard to the circumstances of discovery, the details are regrettably meagre; the French pair (20 and 21) were found in a female full-length burial, being placed one within the other, surrounded by the remains of cloth, in a small bronze vase. At Deal (6 and 7), one was found on either side of the head of a skeleton laid at full length, north-east and south-west, the grave being cut in the chalk on an

¹ For permission to reproduce, grateful acknowledgment is made to M. Auguste Picard, editor of Déchelette's *Manuel d'Archéologie*; the Royal Archaeological Institute; the Cambrian Archaeological Association; and the Kent Archaeological Society.

² Mr A. J. H. Edwards, F.S.A.Scot., made an experiment with a shallow spoon in which a small perforation had been drilled. He found that, while water would not run through it, oil flowed freely through the perforation.

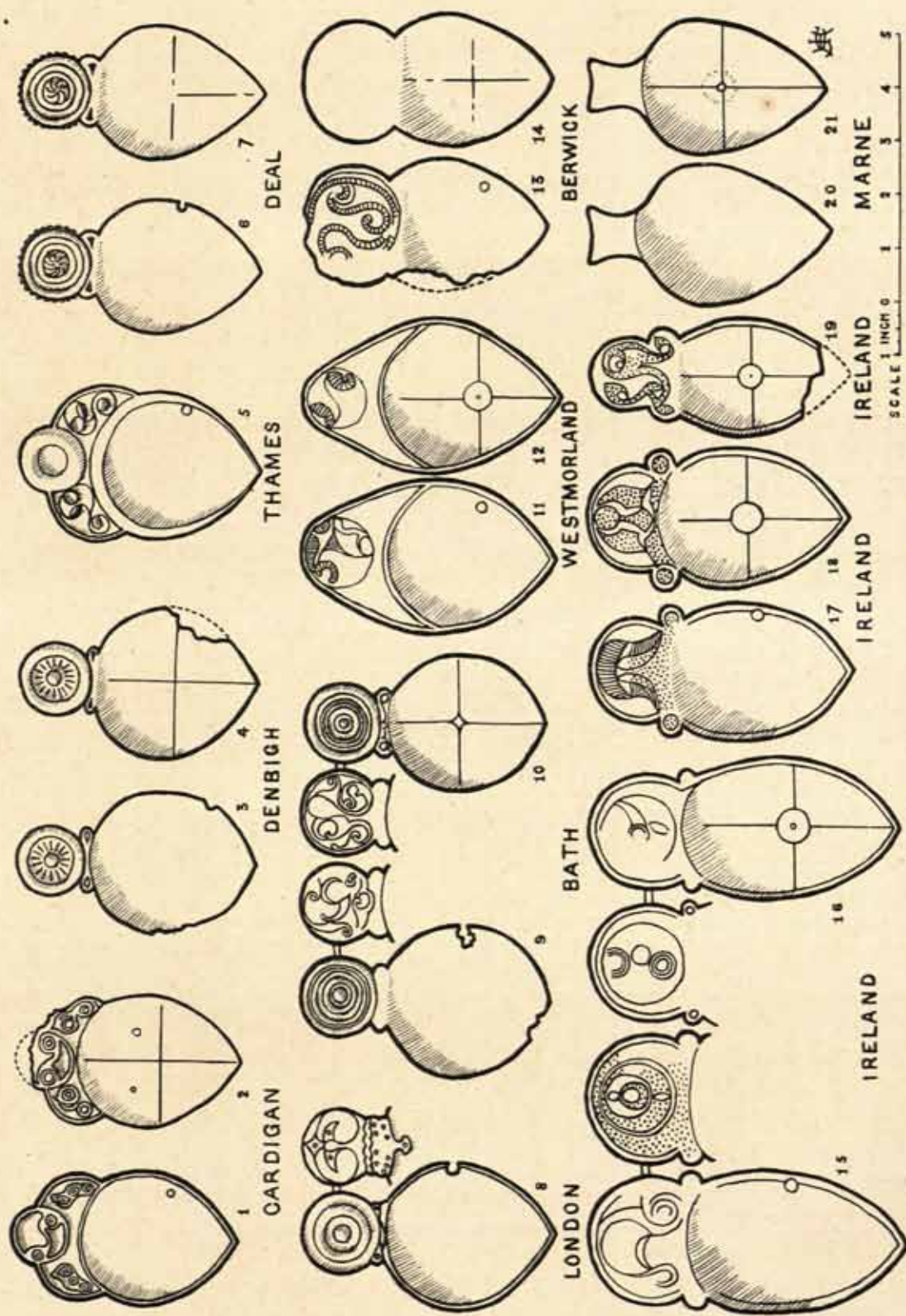


Fig. 4. Recorded examples of Bronze Spoons. (1.)

DISCOVERIES OF BRONZE SPOONS.

No.	Locality.	Date.	Particulars of Discovery.	Size in Inches.	Description of Spoons.	Museum.	Authority.
1 2	WALES. Pembryn parish, near Cardigan.	About 1829.	Under a heap of stones in a non- Roman camp called Castell Nadollig. No associated relics recorded.	$4\frac{1}{2} \times 2\frac{1}{2}$	Of orange-yellow bronze. In form resembling No. 5. Curvilinear designs on handles. 1. Perforation at right side. 2. Design on handle differing from No. 1. Incised cross on bowl. Two small holes in bowl, one being filled with a gold plug. Bronze, having a large percentage of copper. Apparently from the same mould. Concentric em- bossed design, resembling Nos. 6, 7, 8, 9, and 10. No engrav- ing in design. 3. A fracture close to the right edge probably represents an in- dentation such as those in Nos. 6 and 8, which take the place of the usual perforation. 4. Engraved cross.	Ashmolean, Oxford.	<i>Archæologia Cam- brensis</i> , 3rd ser., vol. viii, p. 214 (1892). <i>Archæo- logical Journal</i> , vol. xxvi, p. 58 (1889).
3 4	Llanfair parish, Denbigh.	1861.	Among rubbish thrown from a railway cutting (depth not known) to the south of Ffynogion. Close- ly adhering face to face by encrusta- tion.	$4\frac{1}{2} \times 2\frac{1}{2}$		National Museum of Anti- quities, Edin- burgh.	<i>Archæologia Cam- brensis</i> , 3rd ser., vol. viii, p. 268. <i>Archæological Journal</i> , vol. xxvi, p. 50, and vol. x, p. 57. <i>Scotland Times</i> , <i>The Iron Age</i> , p. 138. <i>Soc. Ant. Scot.</i> , vol. v, p. 110, and vol. vii, p. 350.
5	ENGLAND. Thames.	Before 1866.	Not recorded. Taken from the bed of the river.	$4\frac{1}{2} \times 3$	Of fine yellow bronze. A very fine example. Handle wider than bowl. Resembling No. 1. Edges of bowl raised. Perfora- tion at right side. Handle worn with friction of thumb and forefinger.	British Museum (Roach Smith Collec- tion).	<i>Archæologia Cam- brensis</i> , 3rd ser., vol. viii, p. 210. <i>Archæological Journal</i> , vol. xxvi, p. 54. <i>Brit. Mus. Guide to Antiq. of Early Iron Age</i> (1905), p. 130.
6 7	The Mill Hill, Upper Walmer, Deal.	Shortly before 1904.	On an elevated plateau, among graves of later Romano-British date. One spoon on either side of the head of a skeleton laid at full length N.E. and S.W. in a grave in the chalk.	$4\frac{1}{2} \times 2\frac{1}{2}$ $4\frac{1}{2} \times 2\frac{1}{2}$	Handles with wavy outline; con- centric moulding like Nos. 3, 4, 8, 9, and 10; central boss spirally ornamented. Traces of fibrous matter on back.	Corporation Buildings, Deal.	<i>Archæologia Can- tiana</i> , vol. xxvi, p. 9 (pl. iv.). <i>Proc. Soc. Ant. Lond.</i> , 2nd ser., vol. xxxi, (1918- 19).

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8	Brick Hill Lane, Upper Thames Street, London.	1822.	Not recorded.	Nearly $4\frac{1}{2} \times 2\frac{1}{2}$.	Handle with embossed concentric design, reverse engraved with curvilinear design. Repaired on back with ornamented plate fixed with rivets. Perforation close to right edge.	British Museum (Albert Way's Collection).	<i>Archæologia Cambræsis</i> , 3rd ser., vol. viii, p. 212. <i>Archæological Journal</i> , vol. xxvi, p. 55.
9 10	Weston, about 1 mile N.E. of Bath, Somerset- shire, near the road to Bristol.	1890.	On the brow of a small hollow in which a rivulet flows. In remov- ing soil for a quarry, 7 ft. below surface (depth probably due to soil slipping down a cultivated bank). No other relics.	$4\frac{1}{2} \times 2\frac{1}{2}$.	Embossed concentric designs, not similar. Produced on a mould which may have been of wood turned on a lathe. Dissimilar designs on reverse of handles. 9. Damaged perforation. 10. Engraved cross radiating from a quadrangular figure in the centre.	National Museum of Antiquities, Edin- burgh.	<i>Archæological Journal</i> , vol. xxvi, p. 80, <i>Scot- land in Pagan Times: The Iron Age</i> , p. 134, <i>Proc. Soc. Ant. Scot.</i> , vol. viii, p. 390.
11 12	Graben, in Cros- by Ravensworth parish, West- morland.	Shortly before 1809.	Found 7 or 8 yds. apart, and 12 to 18 ins. deep, in boggy ground near a spring.	$4\frac{1}{2} \times 2\frac{1}{2}$.	Pale-coloured bronze, handles only slightly defined. Designs dis- similar, not in relief, curvi- linear engraved lines of a fine zigzag tooling. Resemble Irish examples. 11. Perforation punched, showing a bur at back. 12. Cross with central circle.	British Museum.	<i>Archæological Journal</i> , vol. xxvi, p. 62 (1899).
13 14	SCOTLAND. Catch-a-Penny, Burnmouth, Berwickshire.	1923.	At a quarry; in a stone-built grave 5 ft. 7 ins. long and 27 ins. be- neath the surface. With skeleton of a man, laid on right side, knees slightly flexed, hands in front of chest. Be- tween hands and skull two spoons, 6 ins. apart, an iron knife lying on one of them, bones of a young pig, and fragments of coal and wood.	$4\frac{1}{2} \times 2\frac{1}{2}$.	Much corroded; bowls very slightly hollowed, metal thin. 13. Perforation at right side, left side damaged, stained with rust from iron knife. Traces of curvilinear engraved design on handle. 14. Cross very faint, handle much corroded.	National Museum of Antiquities, Edin- burgh.	

DISCOVERIES OF BRONZE SPOONS—Continued.

No.	Locality.	Date.	Particulars of Discovery.	Size in Inches.	Description of Spoons.	Museum.	Authority.
15 16	IRELAND. Ireland.	Before 1833.	Not stated.	$5\frac{1}{2} \times 2\frac{1}{2}$.	Yellow-coloured bronze. Not from the same mould. Long and narrow, flattened. Not embossed. Engraved design on back and front, curvilinear, with stipple-marking. 15. With perforation to right. 16. Cross radiating from a central circle.	Museum of Royal Irish Academy, Dublin.	<i>Archæologia Cambrensis</i> , 3rd ser., vol. viii. pp. 200, 212. <i>Archæological Journal</i> , vol. xxvi. p. 66.
17 18	Ireland.	Before 1833.	Not stated.	$5 \times 2\frac{1}{2}$.	Brown rusty colour. Not fellows. Design engraved, curvilinear, with stipple-marked ground, and hatching.	Museum of Royal Irish Academy, Dublin.	<i>Archæologia Cambrensis</i> , 3rd ser., vol. viii. pp. 200, 212. <i>Archæological Journal</i> , vol. xxvi. p. 67.
19	Ireland.	Before 1833.	Probably from a turbary or bog.	$4\frac{1}{2} \times$ nearly $2\frac{1}{2}$.	Slight and elongated. Engraved curvilinear design with stippled ground. Cross radiating from a central circle. Point of bowl damaged.	Free Public Museum, Liverpool (Meyer Collection).	<i>Archæological Journal</i> , vol. xxvi. p. 64 (1830).
20 21	FRANCE. Pogny, in Marne, France.	1910.	From the grave of a woman, one within the other, surrounded by the remains of cloth, in a small bronze vase.		Handles narrow and squarish, with no ornamentation. 20. Quite plain, no perforation. 21. With incised cross, having a perforation at the centre.		<i>Manuel d'Archéologie Préhistorique</i> (Duchetel), vol. ii. p. 1275.

elevated plateau close to later cremated burials of Romano-British date. Of the other discoveries little is known; the earliest was made near Cardigan (1 and 2) about 1829, the spoons being found beneath a heap of stones in a camp of non-Roman construction.

The British spoons are all placed in public museums: 6 are now in the National Museum of Antiquities in Edinburgh, 4 in the British Museum, 4 in Dublin, 2 in Deal, 2 in Oxford, and 1 in Liverpool.

REPORT ON THE SKELETON FOUND IN THE GRAVE.

By Professor ARTHUR ROBINSON, M.D.

The bones available for investigation are:—

Axial Skeleton.—The cranium, considerably broken; parts of the maxillæ with the teeth complete; the greater parts of the two zygomatic bones; the mandible with the third left molar missing; parts of several vertebræ; a small part of the sacrum; twenty-two fragments of ribs; the greater part of the manubrium and part of the body of the sternum.

Appendicular Skeleton—Superior Extremities.—Part of the left scapula; the greater parts of both clavicles; the right humerus with the greater tuberosity and the intertubercular sulcus broken; the distal five-sixths of the left humerus; the right ulna complete and the greater part of the left ulna; the right radius and the greater part of the left radius; the left navicular bone; some metacarpal bones and phalanges and fragments.

Inferior Extremities.—Fragments of both hip-bones; the right femur with the distal end partly destroyed, and a portion of the left femur; fragments of both tibiæ; fragments of both fibulæ; both tali; fragments of the calcanei; metatarsals and fragments of metatarsals.

Associated Bones.—A number of bones, teeth, and fragments of bone which are identified by Dr James Ritchie of the Scottish Museum as belonging to a young pig.

A general examination of the human bones leads to the conclusion that they are those of a man about 35 years old, and about 5 feet 9 inches in stature. He had a well-developed thorax, generally well-developed and graceful limbs with strong muscles, and, in spite of the fact that the left fibula is a relatively slight bone, it may be asserted that the muscles which are specially associated with springiness and lightness of foot were particularly well developed.

He may have been a soldier or a hunter, but was certainly not a regular worker on the land.

For the main part, the bones of opposite sides are symmetrical, but, as already stated, the left fibula was relatively slight, and the right ramus of the mandible is smaller in antero-posterior measurement than the opposite ramus.

His teeth are much worn for his age; not so much as those of Australian natives of similar age, but more than those of four Short Cist skulls in the University, which are available for comparison.

Cranium.—The cranium, viewed as a whole (fig. 5), appears to be moderately long and low, with a low, square forehead. Viewed from above, it is quadrangular, with sharp anterior and rounded posterior



Fig. 5. Side view of Burnmouth Skull.



Fig. 6. Upper view of Burnmouth Skull.

angles (fig. 6), and the posterior aspect is also quadrangular, with rounded upper angles.

The frontal tuberosities are present but not prominent. The parietal tubers are more prominent. The superciliary ridges are moderate.

The circumference measures 515 mm., the nasion opisthion is 370 mm., and the biauricular arc 298 mm.

The greatest length, measured from the glabella, is 181 mm., the greatest breadth 138 mm., and the basi-bregmatic height 137 mm.

Its cephalic index is, therefore, 76.2 (mesocranial), its length-height index 72.8 (metrio-cranial), and its breadth-height index 95.6 (metrio-cranial).

Contrasted with four Short Cist crania in the University Museum (catalogue numbers 1 B 205, 1 B 208, 1 B 223, and 1 B 221), of which the first three are male and the last female, the cephalic index does not differ greatly, for one only of the four Short Cist crania (1 B 205) is

brachycranial, with a cephalic index of 80.1, the other three being metrio-cranial, whilst the average cephalic index of the three male Short Cist crania is 79.3.

The length-height index, 72.8, differs still less from that of the two Short Cist crania in which it is obtainable, 1 B 208 (male), 73, and 1 B 221 (female), 72.8.

The difference between the breadth-height indices of the Early Iron Age cranium 95.6, and that of the two Short Cist crania 1 B 208 and 1 B 221, in both of which it is 92, is also not extreme; all three falling into the metrio-cranial group.

The capacity of the Early Iron Age cranium measured with shot is 1430 c.c., and estimated by the general Pearson formula 1352 c.c.

The capacity of Short Cist cranium 1 B 205, calculated by the Pearson formula, is 1508 c.c.

The measured capacity of Short Cist cranium 1 B 208 is 1430 c.c., and the estimated capacity 1404 c.c.

The estimated capacity of Short Cist cranium 1 B 221 is 1369 c.c., and that of Short Cist cranium 1 B 223, 1461 c.c.

The average estimated capacity of the three male Short Cist crania is therefore about 1457 c.c., or about 105 c.c. more than the estimated capacity of the Early Iron Age cranium.

The smallest transverse frontal measurements of the five crania are as follows:—Early Iron (104.5 mm.), 1 B 205 (97 mm.), 1 B 208 (89 mm.), 1 B 221 (96 mm.), 1 B 223 (100 mm.), and the fronto-parietal indices respectively 75.7 (eurymetopic), 66.2 (metrio-metopic), 63.1 (steno-metopic), and 71.9 (eurymetopic).

The greatest transverse frontal measurements are:—Early Iron, 125 mm.; 1 B 205, 122 mm.; 1 B 208, 117 mm.; 1 B 221, 122 mm.; and 1 B 223, 121.5 mm., giving with the smallest transverse frontal measurements the following transverse frontal indices:—83.6, 79.5, 75.7, 78.6, and 82.3.

The transverse frontal measurements and indices show, therefore, greater differences between the Early Iron Age cranium and the four Short Cist crania than do the other indices; the differences are not striking, but when contour tracings of the crania are taken in various planes, and those of the Short Cist crania are superposed on the tracings of the Early Iron Age cranium and are oriented on similar points, very obvious differences appear.

When the median sagittal sections of the Short Cist crania are superposed on a similar section of the Early Iron Age cranium, the orientation being the glabello-inion plane and its centre, it is at once seen (fig. 7, A, B, C) that all the Short Cist crania rise to a higher level at the bregma, and for a varying distance anterior and posterior

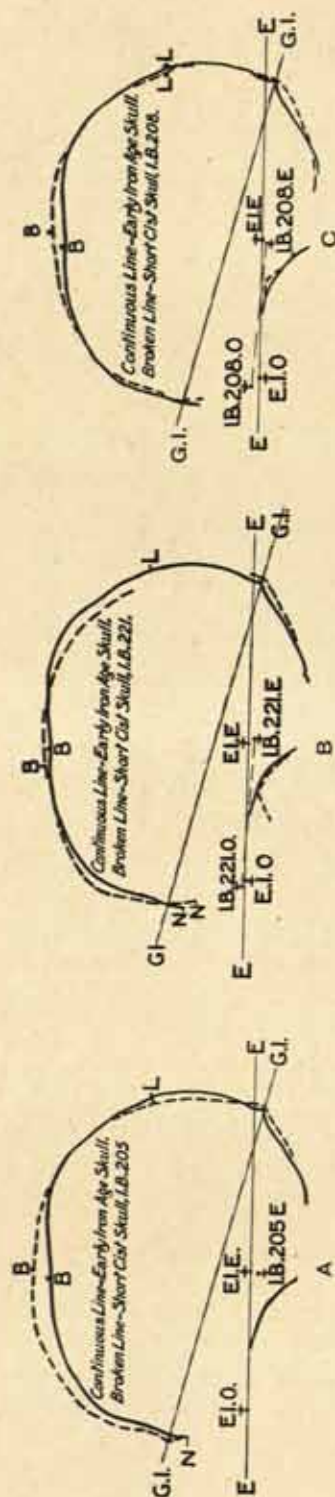


Fig. 7. A, B, C. Median sagittal sections of Early Iron Age cranium and Short Cist crania I.B. 205, I.B. 221, I.B. 208 superposed on glabella-inion plane and its centre. (4.)

G.I. = Glabella-inion plane. E.E. = Eye-ear plane. E.I.E. = Early Iron Age external Meatus. I.B. 205, E, I.B. 221, I.B. 208 = Short Cist external Meatus. E.I.O. = Early Iron Age lower margin of Orbit. I.B. 208, O, I.B. 221, O = Short Cist lower margin of Orbit.

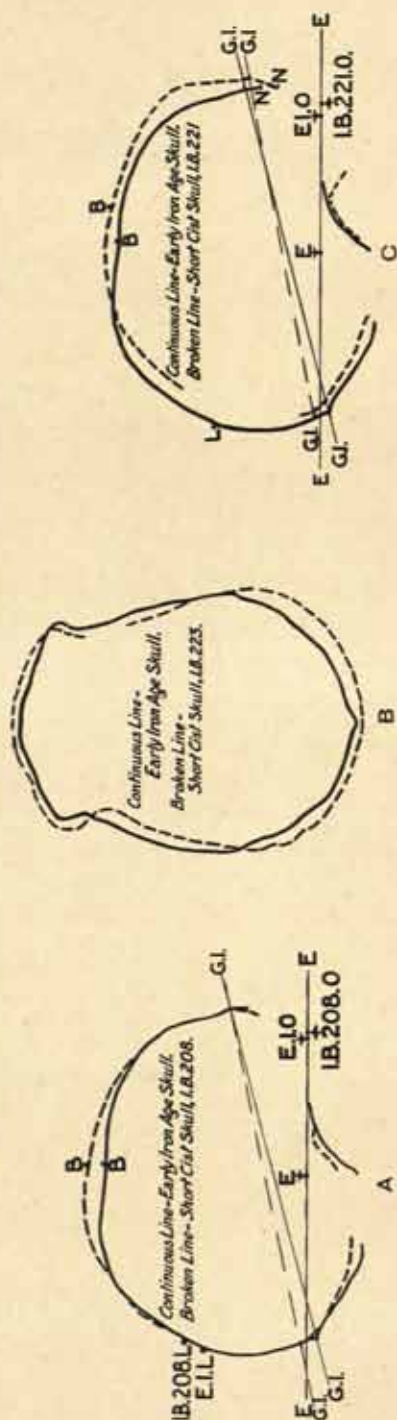


Fig. 8. A and C. Median sagittal tracings of Early Iron Age cranium and Short Cist cranium I.B. 208, I.B. 221 superposed on Eye-ear plane and upper border of external Meatus.

G.I. = Glabella-inion plane. E.E. = Eye-ear plane. E.I.O. = Early Iron Age lower border of Orbit. I.B. 221, O, I.B. 208, O = Lower border of Orbit. L. = Lambda. R. = Bregma.

B. Glabella-inion plane sections of Early Iron Age and Short Cist I.B. 223 crania oriented on central glabella-inion plane. (4.)

to that point, than does the Early Iron Age cranium, and that the nuchal area of the occipital bone lies, on the whole, on a lower and more posterior level.

When the crania are oriented on the eye-ear plane (fig. 8, A, C) and the middle of the upper border of the external meatus, and for this purpose only three of the Short Cist crania are available (1 B 208, 1 B 221, and 1 B 223) of which the first two are figured, the greater elevation of the Short Cist crania above the chosen plane, in the region of the bregma and anterior and posterior to it, is seen to be more marked than when the crania were oriented on the glabello-inion plane.

It is also obvious that in the cases of the three Short Cist crania the glabello-inion and eye-ear planes meet, behind, outside the crania, whilst in the case of the Early Iron Age cranium they meet inside the cranium. The angle of meeting of the two planes in Short Cist crania 1 B 208 and 1 B 221 is 12°, and in 1 B 223, 11°, whilst the corresponding angle in the Early Iron Age cranium is 15°.

In the cases of Short Cist crania 1 B 221 and 1 B 223 a greater part of the cranium lies anterior to the middle of the upper margin of the external meatus than in the case of the Early Iron Age cranium, but in this respect Short Cist cranium 1 B 223 agrees with the Early Iron Age cranium.

In all three Short Cist crania the nuchal plane of the occipital bone is at a higher level than the corresponding area of the Early Iron Age cranium, and in all three Short Cist crania the eye-ear length is greater, to a variable extent, than the corresponding distance in the Early Iron Age cranium.

When glabello-inion plane sections of Short Cist crania are superposed on a similar section of the Early Iron Age cranium two differential characters appear; they are the greater depth and extent of the post-orbital constriction and the greater width and roundness of the occipital region of the Short Cist crania (fig. 8, B).

The breadth index of the cranial base, which indicates the relative proportion of the biauricular breadth to the breadth between the points where the speno-squamous sutures cut the infra-temporal ridges, also indicates a difference between the Early Iron Age cranium and the Short Cist crania. The necessary measurements were available in three only of the Short Cist crania—1 B 208, 1 B 221, and 1 B 223. The indices are—Early Iron Age, 71·3; 1 B 208, 68·2; 1 B 221, 66·6; 1 B 223, 69·1.

Face.—With the aid of plasticine it was possible to make what may be taken as an approximately correct reproduction of the face from which approximately correct measurements could be taken (fig. 9). The reconstruction shows that the face was comparatively long and narrow.

The total facial length, nasion to gnathion, measured 138 mm., and the upper facial length, nasion to prosthion, 84 mm., whilst the bizygomatic width was 127 mm., giving a total facial index of 108.6 (hyperleptoprosopic) and an upper facial index of 66 (hyperlepten).



Fig. 9. Anterior view of reconstructed Burnmouth Skull.

Only three of the Short Cist skulls were available for comparison—1 B 208, 1 B 221, and 1 B 223, the measurements and indices of which are—1 B 208, total length 117 mm., upper length 68 mm., bizygomatic width 118 mm., total index 99; 1 B 221, total length 115 mm., upper length 63 mm., bizygomatic width 112 mm., total index 102.6, upper index 56.2; 1 B 223, total length 122 mm., upper length 68 mm., bizygomatic width 122 mm., total index 100, upper index 55.7. Therefore all three crania, so far as the total facial index is concerned, fall into the same group, hyperleptoprosopic, but as regards the upper facial index, whilst the Early Iron Age skull is hyperlepten, the three Short Cist skulls are lepten.

Nose.—The pyriform aperture of the Early Iron Age skull was apparently long and narrow, but as the right border was missing in the region of greatest breadth, the width had to be estimated as twice the distance from the median plane to the most distant point of the left border. Thus estimated it measured 24 mm., whilst the distance from the nasion to the subnasal point was 59 mm., giving an index of 40.6 (leptorrhine).

Three of the Short Cist skulls were available for comparative measurements—1 B 208, 1 B 221, and 1 B 223, with the following results:—1 B 208, height 48.5 mm., breadth 27 mm., index 59.7 (chamaerrhine); 1 B 221, height 47.3 mm., breadth 26 mm., index 54.9 (chamaerrhine); 1 B 223, height 52 mm., breadth 24.8 mm., index 47.6 (mesorrhine). On the whole, therefore, the nose is narrower and longer in the Early Iron Age skull than in the Short Cist skulls.

Orbits.—The orbital apertures are rounded and wider than high, the measurements being—right orbit, width 40 mm., height 33.5 mm., index 83 (mesoconch); left orbit, width 41 mm., height 40 mm., index 87.9 (hypiconch). Both orbital margins were present in Short Cist skulls 1 B 208 and 1 B 221, and that of the left orbit in 1 B 223. The measurements and indices are as follows:—

1 B 208, right orbit, width 42.5 mm., height 34 mm., index 80 (mesoconch);

left orbit, width 42.5 mm., height 35 mm., index 82.3 (mesoconch). 1 B 221, right orbit, width 41 mm., height 37 mm., index 87.8 (hypsiconch); left orbit, width 38.5 mm., height 37 mm., index 96.1 (hypsiconch). 1 B 223, left orbit, width 42 mm., height 39.8 mm., index 94.7 (chamaeconch).

In the case of 1 B 223 the face had been reconstructed, therefore the measurements and index can only be considered as approximate. There is, therefore, no appreciable difference between the Early Iron Age and Short Cist orbits so far as the skulls used are concerned.

The palate of the Early Iron Age skull tends to be V-shaped, whilst that of the Short Cist skulls is typically U-shaped.

The lengths are—Early Iron Age, 45 mm.; 1 B 208, 49 mm.; 1 B 221, 47 mm.; 1 B 223, 47 mm. The breadths—Early Iron Age, 44 mm.; 1 B 208, 38 mm.; 1 B 221, 40 mm.; 1 B 223, 41 mm., giving the following indices:—Early Iron Age, 97.7 (brachystaphline), 1 B 208, 77.5 (leptostaphline), 1 B 221, 85; 1 B 223, 87.2 (brachystaphline).

The dental index, based upon the relation of the pre-molar length and the basi-nasal length, shows that both the Early Iron Age skull and the Short Cist skulls 1 B 208 and 1 B 221, the only two in which the basi-nasal length was obtainable, are all megadont, the dental length being—Early Iron Age, 46 mm.; 1 B 208, 45 mm.; and 1 B 221, 45 mm. The basi-nasal lengths respectively, 102 mm., 90 mm., and 89 mm., giving indices of 45, 50, and 50.5. The Early Iron Age skull is therefore nearest the border line of the mesodont group on account of its greater basi-nasal length.

The profile angles indicating the degree of prognathism are necessarily only approximate in the cases of the Early Iron Age skull and Short Cist skull 1 B 223, being made on reconstructed skulls, but in the Short Cist skulls 1 B 208 and 1 B 221 the facial bones were intact.

In the Early Iron Age skull the angles are—whole profile 84°, nasal profile 87°, and alveolar profile 78°. Short Cist skulls are—1 B 208 gives whole profile 87°, nasal profile 88°, alveolar profile 78°; 1 B 223, whole profile 90°, nasal profile 90°, alveolar profile 90°.

As regards the whole profile and nasal angles all the skulls are orthognathous, but there are differences in the alveolar profile angle, the Early Iron Age and the Short Cist skulls 1 B 208 and 1 B 221 being prognathous, whilst 1 B 223 is orthognathous.

Mandible.—The mandible of the Early Iron Age skull is a strong bone with a very well-developed chin. It possesses a condylo-symphyseal length of 112 mm., and a condylar breadth of 130 mm., giving a condylo-symphyseal index of 86.1. Unfortunately the condylar parts of the Short Cist skulls 1 B 208 and 1 B 223 are missing, but the condyle is present on one side of the mandible in Short Cist skull 1 B 205 and in

1 B 221. Therefore the condylo-symphyseal length could be measured and the intercondylar breadth estimated by doubling the distance between the lateral borders of the condyle present and the median plane. In 1 B 205 the condylo-symphyseal length is 105 mm. and the condylar width 108 mm., giving an index of 97.2. In 1 B 221 the condylo-symphyseal length is 101 mm. and the condylar breadth 118 mm., giving an index of 85.6. The differences so far as the measurements given are concerned are slight, but when orthogonal tracings of the Short Cist mandibles are superposed on a similar tracing of the Early Iron Age mandible and oriented on the alveolar border and the anterior margin of the first molar tooth, differences are at once obvious.

The chin of the Early Iron Age mandible is more pointed, the height of the body is greater, and the ramus is narrower than in any of the Short Cist mandibles, and the angle is better marked and less rounded. The lateral projections of mandibles of Short Cist skulls 1 B 205, 1 B 208, and 1 B 221 correspond closely when superposed upon one another, and that of 1 B 223 is intermediate between them and the Early Iron Age mandible.

When orthogonal projections of the mandibles oriented on the alveolar plane are taken from above and below, the most striking feature is the amount of the inward leaning of the molars of the Short Cist mandibles, one or more of which are visible from below in the cases of all the Short Cist mandibles, but not in the case of the Early Iron Age mandible (fig. 10, A and B).

The Extremities—Superior Extremity.—The clavicle is a strong bone 157.5 mm. long, well curved, and well marked by muscles.

The fragment of the scapula is too small for any inferences to be drawn from it.

The humerus of the left side is 358 mm. long and the claviculo-humeral index is 44—that is, about the usual European average.

The radius measures 264 mm., therefore the humero-radial index is 73.7, which is slightly higher than the European average, but lower than the Neolithic average.

Inferior Extremity.—The femur measures 484 mm. Its upper platymeric index is 76, its mid-shaft index 120, and its lower platymeric index 60.6, and its angle of torsion 35°.

Though the upper platymeric index is low, it is by no means so low as that found in a femur from the raised beach at Granton.

The torsion is great, and is of interest in connection with a similar condition in an Iron Age femur found at Dolphington, and described by Professor Bryce. It is, however, within the limits of variation of recent men.

Both tibiae were in fragments, and the proximal ends of both were destroyed, but it was possible to obtain a tracing of the shaft at the level of the nutrient foramen, and the platycnemic index was found to be 65.7.

There was no articular facet on the front of the distal end of the tibia such as is associated with races habituated to the squatting position; on the contrary, the anterior border of the distal end fitted during flexion into a fossa on the top of the neck of talus without producing a facet, but effectively preventing great flexion of the ankle joint.

The tali presented no particular features beyond the fact that the ridge for the attachment of the anterior part of the capsule of the

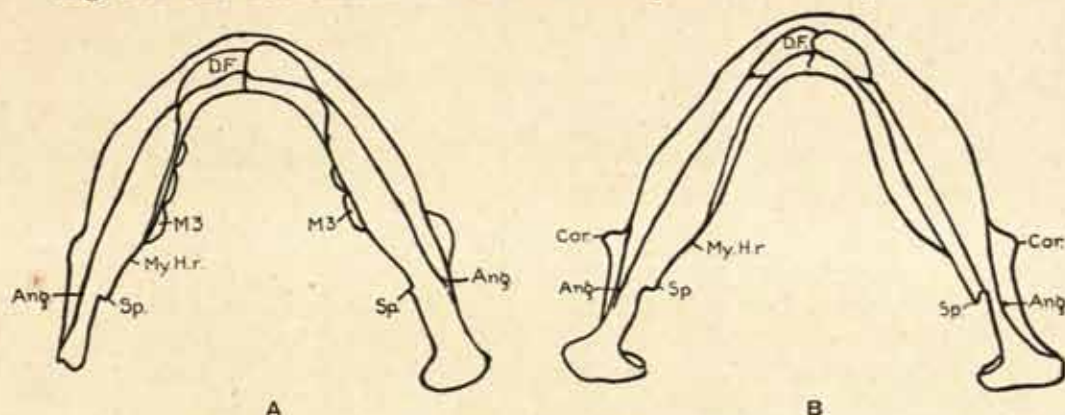


Fig. 10. Orthogonal projections of (A) Short Cist (1 B 221) and (B) Early Iron Age mandibles.

ankle joint is very prominent, indicating that the front of the capsule was frequently stretched, as it would be in running or jumping.

The Short Cist limb bones in the University collection are mostly fragmentary and useless for estimating stature, but in the case of 1 B 205 a humerus and a radius are available. It possessed a brachycephalic cranium with a capacity considerably greater than the capacity of the Early Iron Age skull, and its stature calculated from the radius is 5 feet 7 inches.

The humero-radial index of the Early Iron Age skeleton is 73.7, and that of Short Cist skeleton 1 B 205, 73.1, showing that the radius is relatively longer in proportion to the humerus in the former.

The upper platymetric index of the Early Iron Age femur is 74.3, and that of the Short Cist femur 1 B 208, 80.5; the platymetry of the Early Iron Age femur is therefore much the greater.

The platycnemic index of the tibia of the Early Iron Age is 65.6, and

that of the tibia of Short Cist 1 B 208, 723, showing the very definite and greater platycnemia of the Early Iron Age bone.

When the differences between the Early Iron Age skeleton and those of the Short Cist skeletons are reviewed, it is obvious that, although they are slight, so far as measurements and indices are concerned, nevertheless they are numerous and definite both as regards the skull and the limb bones, and are sufficient to indicate two different groups of people, and it does not seem probable that one could have been evolved from the other, though it is possible that intermediate types between the two, merging into each, might be developed by crossings taking place frequently during a considerable period of time.

II.

FOURTEENTH-CENTURY BROOCHES AND OTHER ORNAMENTS IN THE NATIONAL MUSEUM OF ANTIQUITIES OF SCOTLAND. BY J. GRAHAM CALLANDER, F.S.A.Scot., DIRECTOR OF THE MUSEUM.

In 1878, a small corroded mass of silver coins about the size of a duck's egg was found in a purse in the wall of an old house in Dumfries. No attempt to separate the coins, which have been preserved in the National Museum, was made until two years ago, when the success of Mr A. J. H. Edwards, the Assistant Keeper of the Museum, in treating the large hoard of coins found in Perth, suggested that an attempt should be made to separate and clean those from Dumfries. This was the more desirable, as a small cross and fragments of a chain were seen embedded in the mass. The treatment was entirely successful, and the hoard was found to contain, in addition to the articles mentioned, a complete brooch, portions of other three, and a small bow handle, all of silver.

The cross (fig. 1, No. 1) is equal armed, with a flat circular disc in the centre and four flat arms narrowing towards the extremities, three of which terminate in a flattened knop of oval shape. At the end of the fourth arm is a loop for suspension, which is imperfect, and immediately below it a prominent projecting collar or flange of rectangular shape with rounded corners. The cross measures $1\frac{3}{4}$ inch in height and $1\frac{5}{8}$ inch in breadth. Engraved on one side of the central disc are the letters A G L A,¹ reading backwards, within a circle formed by a single marginal line, and on the opposite side a band of radiating short lines

¹ This formula is not uncommon and consists of the initial letters, in Latin characters, of a Hebrew inscription meaning "Thou art mighty for ever, O Lord."

within single marginal circles with a dot in the centre. Both sides of the arms bear an engraved ladder-like design of short transverse lines within single longitudinal marginal lines. All these designs are filled with niello. Three of the brooches (fig. 1, Nos. 2-4) are ring brooches made of stout wire, one, measuring $1\frac{1}{4}$ inch in external diameter, being complete with its pin, and the others represented by half and rather

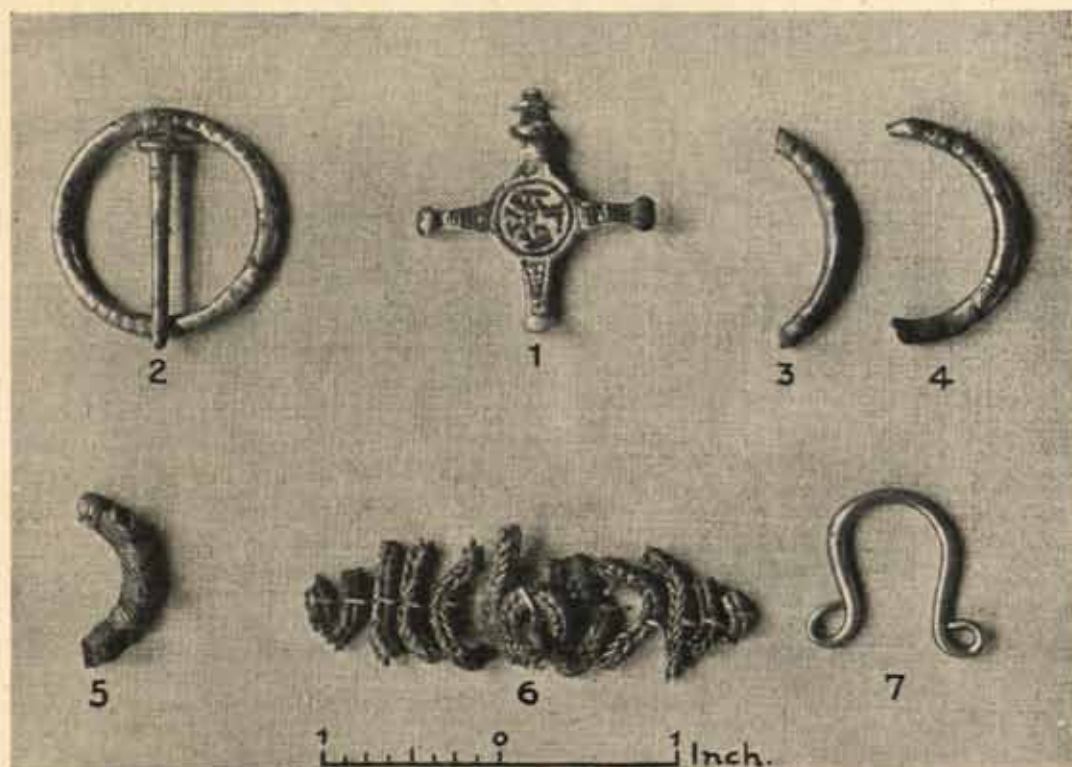


Fig. 1. Silver Ornaments from Dumfries.

less than half of the ring. These three brooches are corrugated transversely, the hollows having been filled with niello, of which traces remain. The pin of the complete brooch is of oval section, and has a loop hinge which has encircled the ring; the half of the loop, however, is broken off. Immediately below it is a prominent projecting round collar or flange, similar to that on the cross below the loop for suspension. The fourth brooch (fig. 1, No. 5) is of a different type. On the front of the ring there have been six collets, separated by a similar number of low hemispherical protuberances, covered with small pellets

like the drupes of a bramble, projecting from it. Each collet has been set with a gem in an oval socket on the summit. Barely half of the brooch has survived, but this part shows that it had been 1 inch in diameter. Three of the mounts remain, and two of them still retain the stone setting. One of these is red, but the colour of the other is indeterminate, owing to the decay of the surface of the stone. The brooch has been gilded. The pin is missing, and also the part of the ring to which it was hinged. The chain (fig. 1, No. 6) is formed of thin plaited wires of the variety known as Trichinopoli work; it is broken into eleven short lengths, one of these being twisted into a knot, the combined length of these fragments being about 10 inches. The last of the articles is a small bow handle of wire (fig. 1, No. 7), which is thickest at the centre of the bow and attenuates towards the ends. The latter converge slightly before they recurve outwards and upwards to form the loops for attachment.

The coins have been submitted to Dr George Macdonald, who has classified them as follows:—

SCOTTISH.

Alexander III.

Five pennies, a half of one, and a quarter of another	7
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John Baliol.

One penny, St Andrews Mint	1
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ENGLISH.

Edward I.

London	Mint	.	.	.	96 pennies
Canterbury	"	.	.	.	46 "
Durham	"	.	.	.	17 "
Bristol	"	.	.	.	8 "
Bury St Edmunds	"	.	.	.	7 "
Newcastle	"	.	.	.	4 "
York	"	.	.	.	3 "
Berwick	"	.	.	.	2 "
Dublin	"	.	.	.	2 "
Exeter	"	.	.	.	1 "
Hull	"	.	.	.	1 "
Chester	"	.	.	.	1 "
Fragments		.	.	.	15 "
					—
					203

FOREIGN.

Robert de Bethune.

Two Sterlings, Alost Mint	2
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Dr Macdonald considers that the hoard was deposited about 1310.

The Dumfries silver cross, in the expanding terminals of its arms and in its central inscribed disc, resembles another talismanic cross formed of jet and found in an adjoining county, which has been brought to my notice by Mr A. O. Curle, who has also supplied me with a photograph of the relic (fig. 2). It was found in a crannog in Loch Rutton, in the Stewartry of Kirkcudbright. The cross is imperfect, and consists of "a circular central disc, $\frac{3}{4}$ inch in diameter, with two arms, the other two arms broken off and wanting. The disc is flat on each face and rounded on the edge, and the arms have the corners rounded off and terminate in flat triangular ends with a moulding at the base. When complete, it would measure $1\frac{1}{2}$ inch between the points of the transverse arms. On the face of the cross the disc has been inlaid with a floriated Greek cross and small discs between the outer terminations of the arms. A socket marks one of the arms below the moulding. The reverse is plain except the disc, which bears the letters IHC with a mark of contraction over them. The form of the lettering on the cross and the character of the pottery," which was found with it, "suggest an early thirteenth-century date for the occupation of the crannog."¹



Fig. 2. Part of Jet Cross from Loch Rutton, Kirkcudbrightshire.

BROOCHES OF SILVER AND GOLD.

In glancing over Scottish archaeological collections, one cannot fail to remark the scarcity of personal ornaments which can be ascribed to the long period which elapsed between what may be called prehistoric² and comparatively recent times. Ornaments of the Bronze Age, the Early Iron Age, and Viking times are quite numerous, and there is a fair selection dating to the Early Christian period. With the exception of the relics described in this paper, which, without doubt, generally belong to the time of the Scottish Wars of Independence, few trinkets or jewels are to be seen which can be dated earlier than the time of Mary, Queen of Scots, a number of whose jewels have been preserved, chiefly in private hands. The practice of melting down plate and ornaments as fashions

¹ *Trans. Dumfriesshire and Galloway Nat. Hist. Soc.*, vol. xvii. (1901-2), p. 135; *Anc. Mon. Com. Inventory for Stewartry of Kirkcudbright*, p. 177.

² Though it may not be quite correct to refer to Viking and Early Christian periods as prehistoric, practically all that we know about the relics of these times found in Scotland has been ascertained by the methods of the prehistorian and not from documentary evidence.

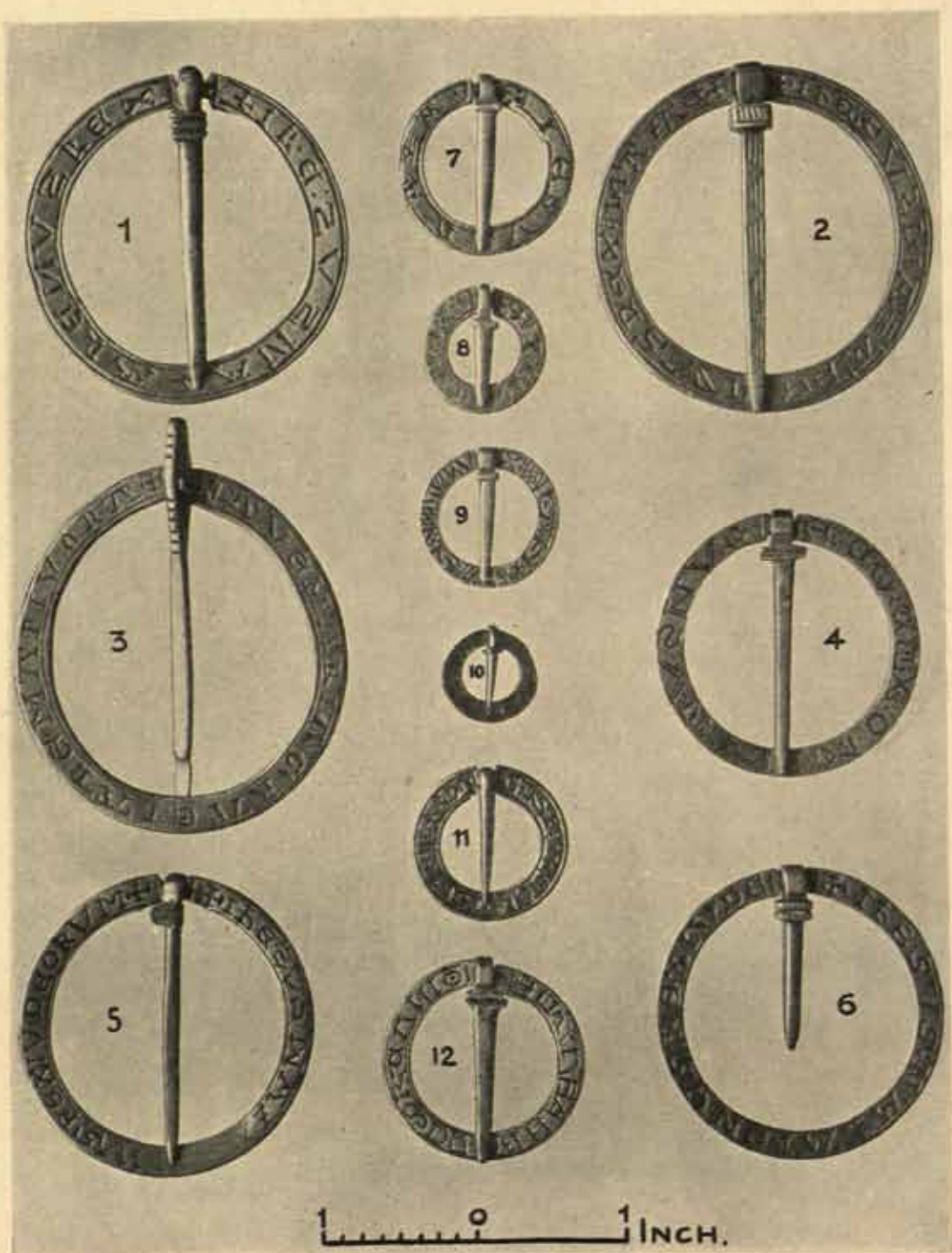


Fig. 3. Talismanic Brooches of Gold, Silver, and Brass.

changed, or to provide funds in times of stress, has continued throughout the ages, and in a country like Scotland, which for centuries was either engaged in a desperate struggle to maintain its independence against a far stronger and wealthier neighbour, or torn with internal troubles, it is not surprising that very few of this class of relics have survived. It is remarkable, however, to find that the greater number of those which have come down to us should belong to the time of Bruce, when the country was in the direst straits.

The relics to be reviewed consist of a good collection of brooches and a few other trinkets, which are preserved in the National Museum, and reference will be made to several other examples of the first-named class of ornaments in other collections.

In considering the brooches, it will be seen that they fall into five distinct types, two of which may be further divided into sub-varieties. Although the types of brooches are quite different, it will be found that certain characteristics are common to more than one. These features are so distinctive, that, even though the brooches had been found singly, instead of different varieties being found in association and with coins of the same date, there would have been no difficulty in assigning them to the same period.

The first and second types bear talismanic or magical formulas. The first variety is a ring brooch with the front flat and the back either flat or rounded, so that the ring is sometimes rectangular and sometimes plano-convex in cross section (fig. 3). On the front of those of rectangular section is an inscription, and on the back either an inscription or ornamentation. On those of plano-convex section the front bears an inscription, while the rounded back is plain. The commonest formula is *IESVS NAZARENVS REX IVDEORVM*, but it is generally contracted or blundered, and it is sometimes repeated on the back. Other talismanic formulas which occur are one beginning *AVE MARIA*, others *IASPAR*, *MELCHIOR*, *ATROPA* (the three kings or wise men), the reversible inscription *ANSOGANAGOSNA*, and *AGLA* which we have observed on the cross in the hoard from Dumfries. That the engravers of these inscriptions were quite illiterate craftsmen is evident, as it is very seldom that all the words are correctly spelt. Inverted and contorted letters and misspelt and reversed words are of frequent occurrence.

The second type is octagonal in shape, each of the eight sides being flat on one face and ridged on the other, so as to show a triangular cross section: every alternate side is reversed, so that the front and back of the brooch exhibit four rectangular flat panels separated by ridged sections (fig. 4). The flat panels on the front usually bear

variations of the "Jesus of Nazareth" formula, while those on the back have also an inscription or are ornamented. At times the ridged sections are decorated.

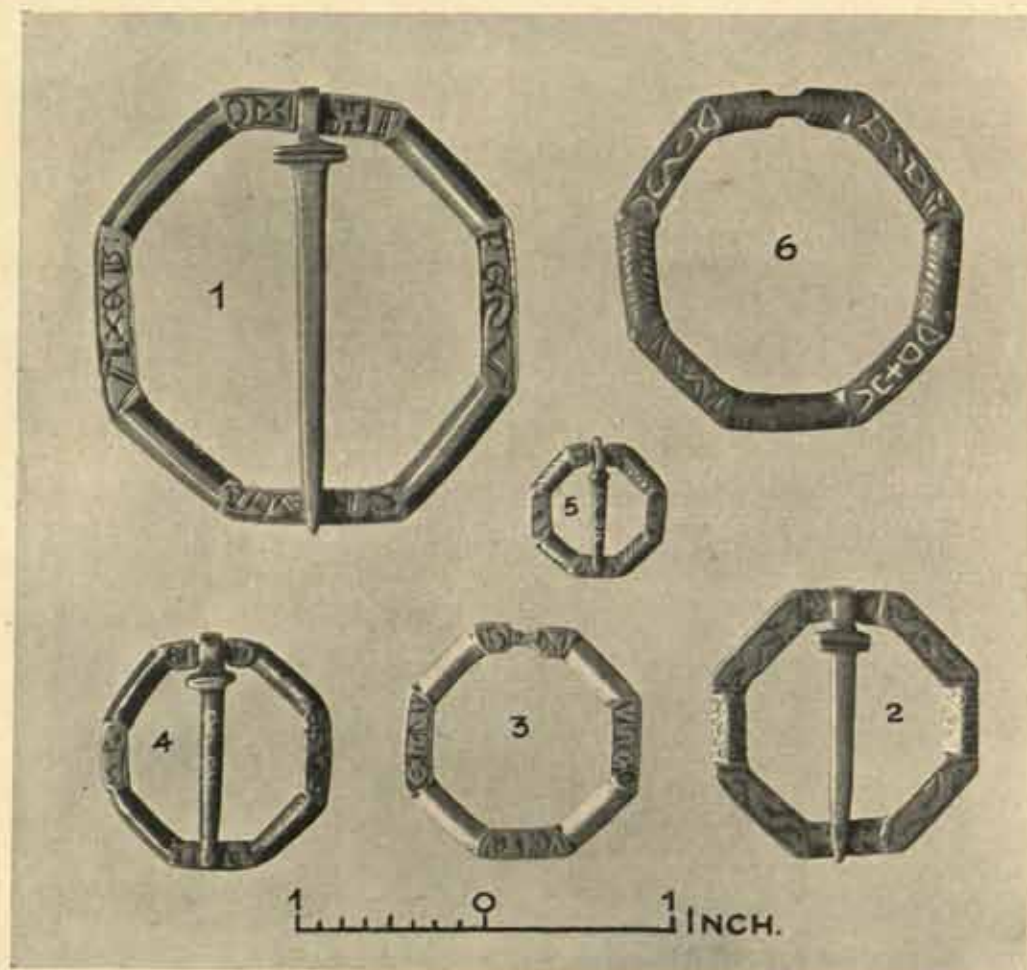


Fig. 4. Talismanic Brooches of Silver.

The third and fourth types (fig. 5) are ring brooches like the first, but are formed of stout wire. The third variety is the more elaborate of the two, and it may be divided into two sub-varieties, one showing four or six rosettes attached at equal intervals to the front of the ring, with a knop or bead encircling it midway between the rosettes (fig. 5, Nos. 1 and 2), and the other with six flat plates in place of

the rosettes and no intervening knops (fig. 5, Nos. 3 and 4). Several of this class show traces of gilding. In the fourth type, which may also be divided into two sub-varieties, there are no attached decorative

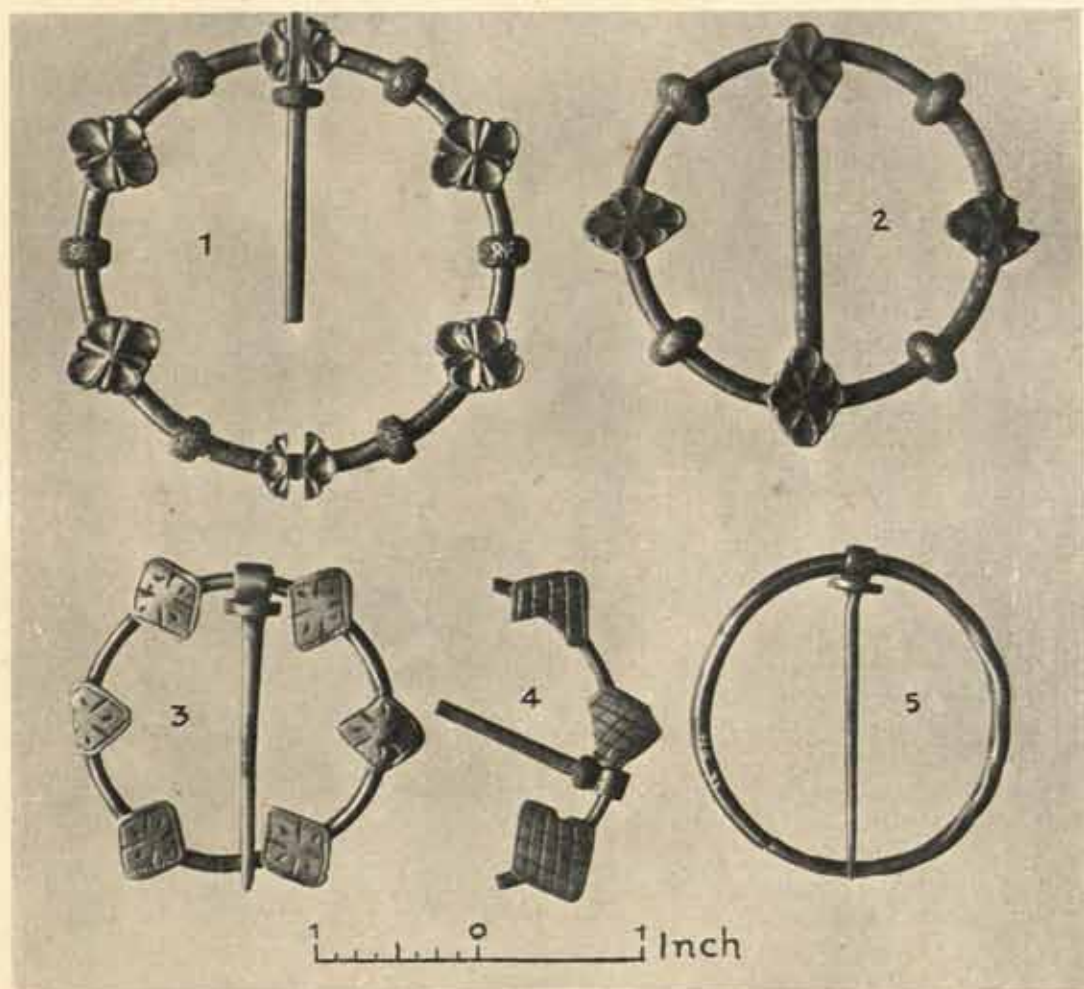


Fig. 5. Silver Brooches.

features; in one sub-variety the wire ring generally exhibits transverse or oblique grooves which have been filled with niello (fig. 1, No. 2), and in the second sub-variety half of the ring is twisted (fig. 5, No. 5). The fifth and last variety is represented in the Museum by a single specimen, the jewelled example from Dumfries previously described. Brooches

like it have been discussed elsewhere under the title of the Norman ferail.¹ It is described on p. 161.

In the National Collection there are thirty-three brooches which belong to one or other of the first four types. Although some of them are fragmentary or want the pin, there is a good selection of complete specimens. In addition to these examples, I have been able to obtain information about seven more in other hands, four of which I have seen.

The brooches in the Museum consist of four (two incomplete) found with two gold finger-rings, fifteen beads of jet (twelve oval, one a flattened spheroid, and two faceted), and fifty-three pennies of Edward I. and II., two of John Baliol, and one of Alexander III., while a field was being ploughed at Woodhead, Canonbie, Dumfriesshire, in 1861; two found with a finger-ring, a pin, part of a sheath-like object, all of silver, and coins of Edward I., II., and III., in a three-legged pot of brass at Langhope, Roxburghshire, in 1882; three found in the ruins of Middlebie Church, Dumfriesshire, in 1851; five (two incomplete) found with Edwardian coins in a garden at Brechin, Forfarshire, in 1891; two found with coins of Alexander III., John Baliol, and the Edwards in an earthenware pot² in the old fort at Ayr, in 1862; one found with coins of David II. and Robert II. at Branxholm, Roxburghshire, in 1860; one from a grave in the kirkyard of Athelstaneford, East Lothian; one from Islay, Argyll; one from under the floor of Dunfermline Abbey; one from the Culbin Sands, Morayshire; seven without localities; one from near Norham Castle, Northumberland; one from Hexham, Northumberland; and the three from Dumfries already mentioned. Of the seven brooches outside the National Museum, one is in the Forres Museum and was probably found in the neighbourhood; one of gold from Bute was exhibited by Sir Malcolm Macgregor, Bart., of Macgregor, at the Glasgow Exhibition of 1911;³ one belonging to Mr Gavin Hamilton, Lesmahagow, was shown at the same exhibition;⁴ and of three in the collection of Mr C. E. Whitelaw, F.S.A.Scot., one was found in Perth, one was bought in Aberdeen, and the third in Glasgow. In 1852, Sir Walter C. Trevelyan, Bart., exhibited before the Society a brooch found in the ruins of Eilean Donan Castle, Loch Duich, Inverness-shire. These brooches total forty specimens, two of which were found in the extreme north of England.

In the following list a detailed description of the brooches is given under their different classes. They are all made of silver except Nos. 9, 10, and 13, which are of gold.

¹ *British Arch. Assoc. Journal*, 1862, p. 227.

² *Proceedings*, vol. xxvi. p. 60, figs. 1 and 2.

³ *Glasgow Exhibition (1911) Catalogue*, p. 138, No. 30.

⁴ *Ibid.*, No. 26.

FIRST TYPE.

(a) Flat Ring Brooches, the Ring of Rectangular Section.

1. Complete with pin (fig. 3, No. 4), found at Brechin with Nos. 14, 17, 25, and 35. It measures $1\frac{3}{8}$ inch in diameter, and bears on the face the formula ☒ IHESVS NAZAVRIOR, and on the back eight letters as in illustration, followed by IHESVS NVS. Traces of niello are seen in the inscriptions. The pin is of flattened oval section, with a collar projecting prominently on either side and very slightly on the front and back; on the front of the collar is a horizontal medial groove.

2. Complete with pin (fig. 3, No. 2), locality unknown. It measures $2\frac{1}{8}$ inches in diameter. The face bears the formula ✠ IHESVS NAZARENVS REX NAZAE ✠ bordered with single marginal lines, and the back is ornamented with reversed triangles alternately plain and hatched transversely. The pin, which is decorated in front with similar triangles, is of rectangular section, and has a rectangular collar ornamented on front and back with vertical lines between single marginal lines.

3. Complete with pin but slightly compressed (fig. 3, No. 3), locality unknown. It measured originally about $2\frac{1}{4}$ inches in diameter, and bears the formula ✠ IHESVS NAZARENVS REX IUDEORUM A on the front, and ✠ AVE MARIA GRACIA LEMA PIU ORA ✠ on the back. The pin, judging from those on the other brooches, is not the original one, as it thickens at the hinge part, where it is split, the halves having been pressed together after being slipped round the ring. This type of pin is frequently seen on seventeenth-century Highland ring brooches.

4. Ring broken at hinge, but parts complete, with pin (fig. 3, No. 12), found at Ayr with No. 18. It measures $1\frac{5}{8}$ inch in diameter, and on the face bears the blundered formula seen in the illustration. The pin is of rectangular section, and the collar, which projects at the sides, bears a horizontal medial groove on the front.

5. Complete with pin (fig. 3, No. 7), locality unknown. It measures $1\frac{1}{8}$ inch in diameter, and on the face bears the formula X IESVS NAZA between single marginal lines. The pin is of flattened oval section, with the collar projecting slightly in front and at the sides.

6. Complete with pin (fig. 3, No. 8), found at Athelstaneford. It measures $1\frac{3}{8}$ inch in diameter, and has the formula X IHESVS NAZARE on the face, the back being decorated with quatrefoils.

7. Imperfect at hinge and pin missing, locality unknown. It

measures $1\frac{1}{8}$ inch in diameter. On the face is inscribed the formula G ✠ A ✠ A ✠ L (AGLA); the outer and inner edges of the back have a twisted cord moulding.

8. Complete with pin (fig. 3, No. 9), found on the Culbin Sands. It measures $\frac{5}{16}$ inch in diameter, and bears on the face the formula IESVS NA. The pin is flattened, and the collar projects slightly to the front and on the sides.

9. Complete with pin (fig. 3, No. 11), found in Islay, and made of gold. It measures 1 inch in diameter, and bears on the one side the formula IESVS NAZARENVS R, and on the other IASPER MELCHITR ATROP. The pin has no collar.

10. Exhibited at Glasgow Exhibition (1911) by Sir Malcolm Macgregor, Bart. This brooch, which is of gold, was found at Kames Castle, Bute; on the front it bears the formulas IESVS NAZARENVS REX IVDEORVM IASPAR MELPCHIOR ATROPA, and on the back are engraved grotesque animals.

11. Preserved in the Forres Museum. It bears on the face the reversible formula ANSOGANAGOSNA. The pin is of oval section, and has a zigzag engraved along the front; the projecting collar is round.

12. Exhibited at Glasgow Exhibition (1911) by Mr Gavin Hamilton, Lesmahagow. It bears the formula ✠ IHESVS NAZARENVS X AVE MARIA OREATE.

13. In the collection of Mr C. E. Whitelaw. This brooch is of gold, and is complete with pin. In cross-section the ring is wedge-shaped. It measures $\frac{5}{8}$ inch in diameter, and bears the formulas AVE MARIA PLENA D ✠ OM INVS TECVM, the first portion, as far as and including the letter D, being on the front, and the latter part on the back. The pin has no collar. It was bought in Glasgow.

(b) *Flat Ring Brooch of Plano-Convex Section.*

14. Complete with pin (fig. 3, No. 5), found at Brechin with Nos. 1, 17, 25, and 35. It measures $1\frac{1}{8}$ inch in diameter, and bears on the face the formula ✠ IHESVS NAZARENVS REX IVDEORVM ✠. The pin is of flattened oval section, and retains part of a heavy projecting oval collar. The letters AREN of the inscription have been obliterated by the friction of the point of the pin.

15. Complete with pin (fig. 3, No. 6), found at Middlebie Church with Nos. 29 and 40. It measures $1\frac{1}{8}$ inch in diameter, and bears the formula ✠ IHESVS : NAZARENVS : REX IVDE. The pin is of flat oval section, and has a projecting rectangular collar, with a horizontal

medial groove on the four sides, and the ridges on each side of the groove, on the front, decorated with small ring punch-marks.

16. Complete with pin (fig. 3, No. 1), found at Woodhead, Canonbie, with Nos. 26, 27, and 32. It measures $2\frac{1}{8}$ inches in diameter, and bears on the face the formula ✠ IHESVS NAZARENVS REX within single marginal lines. The pin is of flattened oval section, and the rectangular collar projects about the same distance on the front and at the sides, which show two horizontal grooves on each. There are traces of niello in the inscription.

SECOND TYPE.

Octagonal Brooches, the Sides alternately Flat and Ridged.

17. Complete with pin (fig. 4, No. 1), found at Brechin with Nos. 1, 14, 25, and 35. It measures $2\frac{5}{16}$ inches in diameter, the formulas on the flat panels on both front and back being OX · XI · HESV SNAZA VIXER (Rex Iv[deorvm] reversed) and RMES IAEV MSD IAN. The pin is flat and thick with chamfered corners, and the collar projects prominently on the sides and slightly on the front and back, which bear a horizontal medial groove.

18. Complete with pin (fig. 4, No. 2), found at Ayr with No. 4. It measures $1\frac{7}{16}$ inch in diameter. The panels in front bear the formula X IHE SVS NA X, and those on the back are decorated by longitudinal wavy lines, while the intervening ridges are decorated by oblique lines meeting at the crest, the spaces between them being occupied by small punched circles. The inscription and engraved lines are filled with niello. The pin is of oval section, with a projecting rectangular collar bearing a horizontal medial groove on front and back, both sides of the groove having short engraved oblique lines.

19. Complete, but pin wanting (fig. 4, No. 3), locality unknown. It measures $1\frac{1}{4}$ inch in diameter. On the panels in front is a blundered inscription (as in the illustration), while those on the back bear three quatrefoils each.

20. Complete with pin (fig. 4, No. 4), found in Dunfermline Abbey. It measures $1\frac{1}{4}$ inch in diameter. On the panels of the face is the formula IH ESVS NAZ AR E, and on those on the back, in continuation of the same, NVSR EX IV DEO RVM. The pin, of flattened oval section, has a heavy projecting rectangular collar, with a horizontal medial groove on front and back.

21. Complete with pin (fig. 4, No. 5), found at Branhholm. It is only $\frac{3}{4}$ inch in diameter externally. The formula inscribed on the four panels on both sides is indistinct, but consists of two letters on each

panel. On one side is I HE SV SN, and on the other the continuation of the formula AZ AR EN VS. The ridged sections between the panels have their sloping sides decorated alternately with oblique lines meeting at the crest, and small circles formed by a ring punch. The pin, of flattened oval section, has a rectangular collar projecting on all sides.

22. Complete, but pin wanting (fig. 4, No. 6), locality unknown. It measures $1\frac{1}{8}$ inch in diameter, and shows engraved forms like the letters D and C, as well as curvilinear designs on the flat panels and oblique lines meeting at the crest on the intervening ridged sections.

23. Exhibited to the Society in 1852 by Sir W. C. Trevelyan, Bart., found at Eilean Donan Castle, Inverness-shire.¹ The only details recorded are that it was of silver and of octagonal shape, and bore the inscription + IESVS NAZAR.

24. In the collection of Mr C. E. Whitelaw. Complete with pin, found in forced soil near the Old Church Tower, in Dundee. On the panels in front is the formula ✠ IHES VSNA ZARE ✠, and on the back its continuation NVS RES IXNI EN +. It measures $1\frac{1}{2}$ inch in diameter. The pin is flat, and the collar projects on front and both sides, the front having a medial horizontal groove.

THIRD TYPE.

(a) *Wire Ring Brooch with Rosettes and Knops on Ring.*

25. The ring is complete, but of the four rosettes and four knops which were originally attached to it only two complete knops and half of another remain; found at Brechin with Nos. 1, 14, 17, and 35. The ring measures $2\frac{1}{4}$ inches in diameter. The pin is of circular section and wants the collar, which obviously has been detached.

26. Complete, except that the pin wants the point, and the hinge loop has been opened out (fig. 5, No. 1); found at Woodhead, Canonbie, with Nos. 16, 27, and 32. It has six rosettes alternating with a similar number of knops on the ring, the knops covered with small ring punch-marks. The diameter over the rosettes is $3\frac{1}{2}$ inches and over the ring $2\frac{1}{8}$ inches. The pin, which is of square section with rounded corners, has a projecting circular collar decorated on the front with short punched lines; the pin is hinged in the centre of one rosette, the two longer petals having been removed to make room for it, and the point rests in the opposite rosette, which also is without the two longest petals.

27. Half of a brooch similar to the last, but originally provided with

¹ *Proceedings*, vol. i. p. 26.

four instead of six rosettes and knops, two rosettes and one knop remaining; found at Woodhead, Canonbie, with Nos. 16, 26, and 32. The diameter over the rosettes when complete was $2\frac{1}{8}$ inches and over the ring $2\frac{1}{4}$ inches. The knops are ornamented with short punched lines.

28. Complete with pin (fig. 5, No. 2), found at Langhope with No. 33. There are four rosettes and four knops, the rosettes having three small ring punch-marks in the centre, and the knops being covered with similar marks. It measures $2\frac{1}{8}$ inches in diameter over the rosettes and $2\frac{3}{8}$ inches over the ring. The pin is of almost circular section and has a heavy collar, but the latter is hidden by one of the rosettes, which is attached to the head of the pin instead of the ring. The rosettes and knops show traces of gilding.

29. Complete with pin, found at Middlebie with Nos. 15 and 40. It has four rosettes and four knops, the latter decorated with small ring punch-marks and showing traces of gilding. Over the rosettes it measures $1\frac{1}{8}$ inch in diameter, the ring being $1\frac{1}{2}$ inch. The pin is of circular section, and the projecting collar is round and decorated with small ring punch-marks. Like the last brooch, one of the rosettes is attached to the front of the head of the pin.

30. Complete with pin, found near Norham Castle, Northumberland. It has six rosettes, with a quatrefoil in the centre of each and six alternate knops, the latter being decorated by small ring punch-marks. The rosettes and knops have been gilded. Over the rosettes it measures $2\frac{3}{8}$ inches in diameter and over the ring $2\frac{1}{2}$ inches. The pin is of circular section and the collar round, the latter having two horizontal rows of small round pellets made by a ring punch, the rows separated by a deep groove; in the middle of the front of the pin is a small quatrefoil. The hinge of the pin works in the centre of one of the knops on the ring, and the point rests in a groove on the opposite one.

31. In the collection of C. E. Whitelaw. Complete, but original pin replaced by one of later date, bought in Aberdeen. It has four rosettes and four alternate knops, the latter bearing small ring punch-marks. The hinge of the pin is in the centre of a rosette. It measures $1\frac{1}{8}$ inch in diameter across the rosettes.

(b) *Wire Ring Brooch with Lozenge-shaped Plates attached to front of Ring.*

32. Half of brooch with pin (fig. 5, No. 4), and six lozenges when complete but only three remaining, found at Woodhead, Canonbie, with Nos. 16, 26, and 27, the lozenges bearing an engraved lattice design. The extreme diameter over the lozenges was originally $2\frac{1}{2}$ inches and over

the ring 2 inches. The pin, which wants the point, is of flattened oval section, and the collar, which is round, is decorated with small ring punch-marks.

33. Complete with pin (fig. 5, No. 3), found at Langhope with No. 28. It has six lozenges decorated with four long and four intermediate short lines radiating from the centre, the lozenges bearing traces of gilding. The pin, of oval section, has a projecting oval collar ornamented with double or triple milled horizontal ridges. Half of one of the lozenges is broken off.

(c) *Wire Ring Brooch with Rounded Plates attached to front of Ring.*

34. Complete with pin, no locality. On the ring, which is transversely corrugated, are six flat plates, two round and four lozenge-shaped, with the edges scalloped, the lozenge-shaped plates arranged in twos, one pair at the hinge and the other pair opposite; one round plate is fixed on each side. The plates are decorated with small ring punch-marks. The extreme diameter is $1\frac{3}{8}$ inch over the plates and $\frac{3}{4}$ inch over the ring. The pin is flat and has no collar. The front of the brooch is gilded.

FOURTH TYPE.

(a) *Wire Ring Brooch usually Nielloed.*

35. Less than half with pin, found at Brechin with Nos. 1, 14, 17, and 25. When complete it measured $1\frac{3}{8}$ inch in diameter. On the front of the ring are transverse and oblique grooves, doubtless once inlaid with niello. The pin is of oval section and has a prominent oval collar.

36. Complete with pin (fig. 1, No. 2), found at Dumfries with Nos. 37 and 38. The ring is transversely corrugated on the front, and, like the pin, has been nielloed. It measures $1\frac{5}{8}$ inch in diameter.

37 and 38. Fragments of two brooches (fig. 1, Nos. 3 and 4), found at Dumfries with No. 36, which they resemble both in character and ornamentation. Original diameters of the brooches, $1\frac{1}{4}$ inch and $1\frac{1}{2}$ inch.

39. Complete with pin, formed of very thick wire, found at Hexham, Northumberland. It measures $1\frac{3}{8}$ inch in diameter. Four short sections of the front of the ring are decorated with transverse and oblique grooves originally filled with niello, alternating with groups of small rounded projections formed by a ring punch. The pin is of circular section, and has a very prominent round flat collar encircled by two mouldings, which are milled and separated by a deep groove.

(b) Wire Ring Brooch with half of Ring twisted.

40. Complete with pin (fig. 5, No. 5), found at Middlebie with Nos. 15 and 29. It measures 2 inches in diameter. The ring is square in section and is decorated on each of the four sides with a narrow longitudinal zigzag formed by the rocking motion of a small chisel-ended tool. One half of the ring is twisted so as to give this portion the appearance of being spirally fluted. The pin is of rounded section with a round projecting collar.

By tabulating the various finds, the distribution of the brooches and the association of varieties will be more easily recognised (see p. 176).

In the Brechin hoard alone not only do we find the whole four types represented and their contemporaneity established, but their period is indicated by the coins, and in the Woodhead find a sub-variety [third (b)], which is not found among the examples for Brechin, is linked up with the two other types which are common to the two hoards. The associated coins also belong to the same period. There is only one sub-variety of brooch left [third (c)] which has not been found in association with other types or with coins, and it (No. 34) is represented by only one example. But although this object is of lighter make and its pin has not the characteristic projecting collar of the others, it displays in the transverse corrugations on the front of the ring and in the small ring punch-marks on the plates, decorative motifs appearing on some of the other varieties which seem to justify its attribution to a period not much removed from that to which the other brooches belong. The latest coins found in the various hoards were of the reign of Robert III., who died in 1390, only one brooch, and that of the octagonal variety, being associated with them. But as all the coins of the other hoards belong to an earlier date, it is clear that the four different types and their sub-types were very fashionable in the end of the thirteenth and beginning of the fourteenth century.

The small ring punch which was used in the decoration of so many of the brooches was evidently a favourite tool of the silversmiths of the period, as it has been employed in decorating examples in each of the four classes. The use of this tool is displayed most frequently on the knops which encircle the rings of the third class of brooches, and it is seen on the ridged sides of two of the brooches of the second. The rings of the first and fourth types do not offer a very suitable surface for the application of this tool, but it has been used on the collar of the pin of one example in the first group and on the front of the ring of one in the fourth class.

For the further beautifying of these brooches, gilding and niello were

Locality.	First Type.		Second Type.	Third Type.			Fourth Type.		Coins.
	(a).	(b).		(a).	(b).	(c).	(a).	(b).	
Eilean Donan, Loch Duich, Inverness-shire.	1	Edwardian.
Culbin Sands, Moray-shire.	1	...	...	...	...	...	...	...
Forres, Morayshire .	1	...	...	...	...	...	...	...
Aberdeen . . .	...	...	...	1	...	...	...	...
Breechin, Forfarshire .	1	1	1	1	...	...	1	...
Dundee, „ .	...	...	1	...	...	...	...	...
Dunfermline, Fife .	...	...	1	...	...	...	...	...
Islay, Argyll . .	1	...	...	...	...	...	...	...
Kames Castle, Bute .	1	...	...	...	...	...	...	...
Glasgow . . .	1	...	...	...	...	...	...	...
Lanarkshire . .	1	Alexander III., John Baliol, and the Edwards.
Ayr	1	...	1	...	...	...	...	...
Athelstaneford, East Lothian.	1	Alexander III., John Baliol, Edward I., and III.
Dumfries . . . .	...	...	...	...	...	...	3	...
Langhope, Dumfriesshire.	...	...	...	1	1	...	...	...
Woodhead, Canonbie, Dumfriesshire.	...	1	...	2	1	...	...	...
Middlebie, Dumfriesshire.	...	1	...	1	...	...	...	1
Braxholm, Roxburghshire.	1	David II. and Robert II.
Unknown, probably Scottish.	4	...	2	...	...	1	...	...
Northumberland, England.	...	...	...	1	...	...	1	...
	13	3	8	7	2	1	5	1	

favoured. The latter style of decoration continued in vogue in Scotland long after this, as nielloing appears on many Highland brooches of silver made in the third quarter of the eighteenth century.

A considerable number of the brooches retain their original pins, which are provided with a pronounced projecting collar or flange just below the loop of the hinge. This peculiarity in each of the four varieties seems to be characteristic of the period. When it went out of fashion I have been unable to ascertain. The pin is of heavy make, and the collar, which is usually decorated on the periphery, generally conforms in shape to that of the section of pin, whether the latter be round, oval, rectangular, or with chamfered corners. Thus, a pin of round section has a round collar, and one that is flat usually projects slightly in front and rather more at the sides. Even in two of the brooches which have an applied rosette in front of the head of the pin, the collar is retained in spite of its being entirely hidden by the rosette. As we have seen, the collar also occurs on the top arm of the small silver cross from Dumfries.

In the brooches which have a flat ring (the first and second types), the ring is reduced in width by a square notch on the outer and inner edges to receive the loop of the hinge of the pin, but in those which have a wire ring (the third and fourth types) there is no diminution in the thickness of the wire.

It will be noted from the table on p. 176 that the distribution of the brooches is very general throughout Scotland, thirteen of the localised examples coming from districts west and north of the Forth and Clyde, and eighteen from the southern counties, which shows that they must have been very common ornaments. Though a considerable proportion of them were found with English coins, it need not be supposed that they were introduced by the soldiery of the first two Edwards, as it is well known that there were far more English than Scottish coins in circulation in the country during the first half of the fourteenth century, and even later. Besides, had they been typically English brooches, it is to be expected that they would be well represented in the London Museums, but I know of only one example—it is of the first class—in the British Museum, and there is none in the Guildhall Museum, the London Museum, or the Victoria and Albert Museum. The only other examples which have come under my notice are one of the first class with a "Jesus of Nazareth" inscription, which was found in Northumberland, and two of the third class, with rosettes on the ring, one of which is in Devizes Museum¹ and the other which was found at Carisbrooke Castle, Isle of Wight.² Although there are probably others recorded or preserved

¹ *Devizes Museum Catalogue*, part II, p. 122, Pl. lviii., No. 2.

² *Arch. Journal*, vol. ix, p. 110.

elsewhere, it may be claimed that those interesting and distinctive ornaments found in Scotland, of which we have such a good selection, were probably made here.

As already mentioned, a pin, a sheath-like object, and a finger-ring were found in the hoard from Langhope, Roxburghshire. The pin is of unusual shape and wants the point. Its stem, which is of stout make, is hexagonal in section, and the faceted head is in the form of two low hexagonal pyramids placed base to base. It now measures $2\frac{1}{8}$ inches in length. The sheath-like object is made of thin sheet metal, but it is crushed and imperfect at both ends; of oval section and narrowing to a rounded end, it measures $\frac{7}{16}$ inch by $\frac{1}{4}$ inch at the orifice, and $1\frac{1}{16}$ inch in length. The finger-ring, which is $\frac{3}{16}$ inch in diameter, has a flat hoop $\frac{3}{16}$ inch broad, with the inscription ✠ IESV NAZAR engraved on the exterior. There are three other rings of this type in the Museum. Two, without localities, have the inscriptions ☒ IHESVS NAZA and ☒ IHESVS NAZAREN, and the third, from Arbroath, what seems to be the same formula very much bungled and contracted, some of the letters being inverted or reversed. One found near St Andrews, bearing the inscription IHESVS NAZAR, is preserved in the museum at the cathedral there.

The two finger-rings found with the hoard at Woodhead, Canonbie, are of quite a different type from those described; they are of gold and are set with stones. The first has a high oval bezel containing a setting of a light blue stone or glass of irregular oval shape, perforated longitudinally like a bead; this is surrounded by six projecting collets originally set with small stones, of which only two remain, these being green in colour. The second finger-ring has an oval mount set with an irregularly shaped red stone.

BROOCHES OF BRASS OR BRONZE.

In addition to the brooches which we have been considering, there are in the Museum a number made of brass or bronze, the period of which is not so easily fixed as that of the silver brooches. From the fourteenth century down to the latter part of the eighteenth century, the flat ring brooch was a popular ornament in many parts of Scotland, the ring becoming broader and larger until in the seventeenth and eighteenth centuries we get the large, so-called shoulder brooches decorated with panels bearing interlaced designs, foliaceous ornament, and grotesque animals, and when made of silver often inlaid with niello. So far, with a few exceptions, we have been unable to recognise those which were produced in the fifteenth and sixteenth centuries.

Although the brass brooches differ slightly from those of silver, from their general appearance they can be assigned to the four types into which we have divided the latter. Of the first type there are five specimens, of the second type five, of the third type one, and of the fourth type two.

FIRST TYPE.

Flat Ring Brooches.

1. Ring broken and pin missing, found with No. 12 in the broch of Yarhouse, Caithness. It measures $2\frac{1}{2}$ inches in diameter. On the front of the ring is a contracted and bungled variety of the IESVS NAZARENVS inscription.

2. Complete with pin (fig. 3, No. 10), found in South Uist. It measures only $\frac{1}{2}$ inch in diameter. On the front and back of the ring are five crosses like some of those at the beginning and end of the inscriptions on the silver brooches. The pin has a projecting circular collar under the hinge.

3. Complete with pin (fig. 6, No. 1), from the Culbin Sands, Morayshire. It measures $2\frac{1}{8}$ inches in diameter. On the front of the ring is a running foliaceous scroll. The pin, which is made of thin sheet metal bent round the ring to form the hinge, has two projections on each side under the hinge decorated with two incised transverse lines on the front.

4. Complete with pin (fig. 6, No. 2), from the Culbin Sands. It measures $1\frac{1}{2}$ inch in diameter. Attached to and covering the front of the ring are three concentric wires, the central one plain and the other two twisted. The pin has a projecting circular collar.

5. Complete with pin (fig. 6, No. 3), from the Culbin Sands. It measures $1\frac{1}{4}$ inch in diameter. On the front of the ring, which narrows towards the part to which the pin is hinged, are incised radiating lines closely set together. The pin has a projecting circular collar.

SECOND TYPE.

Polygonal (mostly Octagonal) Brooches, the sides alternately flat and ridged.

6. Octagonal, complete but pin wanting, found near Kilchrennan, Argyll. It measures $2\frac{1}{4}$ inches in diameter. There are foliaceous designs on the flat panels on both front and back, except on one panel in front which bears the letters MGS in Lombardic characters.

7. Octagonal, complete with pin, from the broch of Torwoodlee,

Selkirkshire. It measures 2 inches in diameter. On the flat panels on both front and back are foliaceous designs and key patterns. The pin, formed of thin sheet metal hammered in at the sides, is widest just under the hinge, which is formed by bending the top of the pin round the ring.

8. Octagonal, complete with pin, locality unknown. It measures

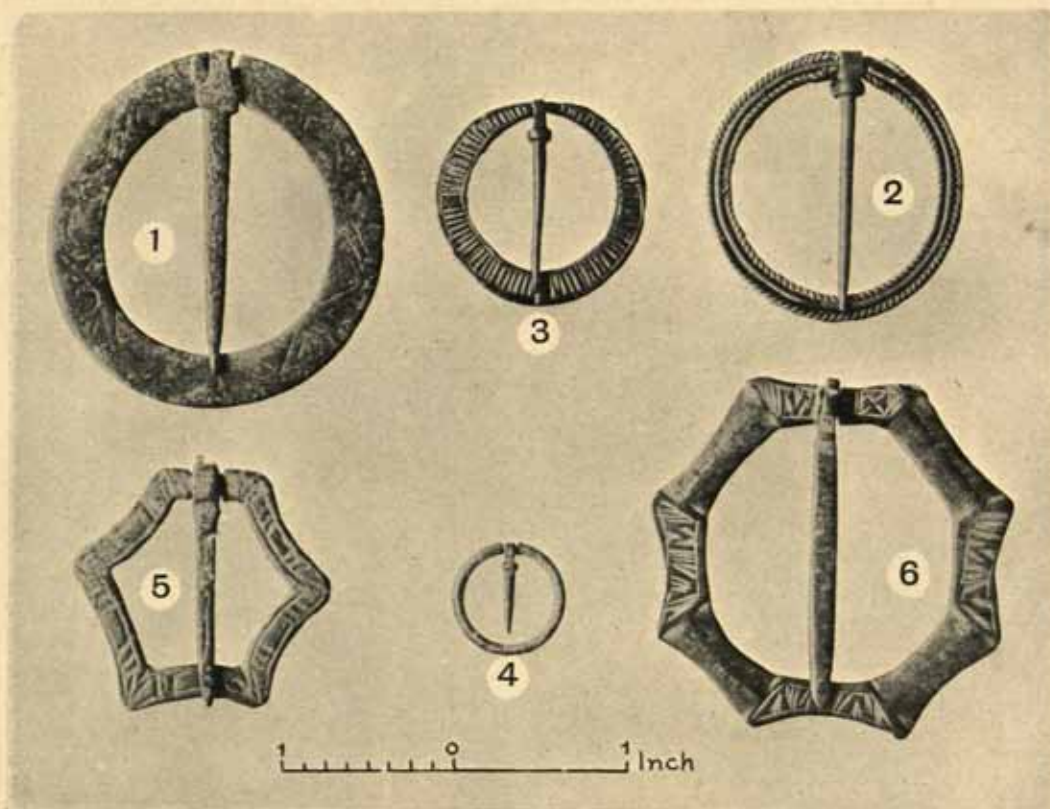


Fig. 6. Brass or Bronze Brooches.

$1\frac{1}{16}$ inch in diameter. It is much corroded, and no ornamentation can be distinguished on the ring. The hinge of the pin, which has no collar, is formed by bending the head round the ring.

9. Hexagonal, complete with pin, from Colonsay, Argyll. It measures $2\frac{1}{8}$ inches in diameter. The brooch is much corroded, but shows foliaceous designs on the flat panels. The pin has no collar, and is bent round the ring at the hinge.

10. More curvilinear than polygonal, and wanting the pin, from

Muckairn, Argyll. Of irregular form, its diameter varies from $2\frac{3}{4}$ inches to 3 inches. On one side are five flat and four alternate ridged sections, the flat ones bearing incised radiating lines; on the other side are four flat and five alternate ridged sections with a zigzag line on the flat sections.

THIRD TYPE.

Wire Ring Brooch with encircling Knops but no Rosettes or Plates attached.

11. Complete, but crushed and wanting the pin, from the Culbin Sands. Originally it measured 2 inches in diameter. Three of the four knops, which had been formed by folding a thin strip of metal round the ring and which had been placed equi-distant from each other, remain in position.

FOURTH TYPE.

Wire Ring Brooches, either plain or partly twisted.

12. Complete, but pin wanting, found with No. 1 in the broch of Yarhouse.¹ It measures $2\frac{1}{8}$ inches in diameter. One half of the ring is plain, the other half twisted.

13. Complete with pin (fig. 6, No. 4), from the Culbin Sands. It measures $\frac{5}{8}$ inch in diameter. The ring is plain, and the pin has a projecting circular collar.

These brooches generally show a close resemblance to those of silver, but as a rule they are more rudely fashioned, and some of them exhibit a different method of manufacture. In the flat ring and polygonal brooches of silver the ring is continuous, but in those of brass there is a break, with the ends overlapping and kept in position by the loop of the pin, which fits into square notches cut in the outside and inside of the ring. This system of overlapping the ends of the ring is met with in many of the large brooches of brass of later times, but occasionally the joint is also brazed. With the exception of No. 40 from Middlebie, all the silver wire brooches have a continuous ring, but the two of brass have a break in it.

When we come to consider the probable dates of these ornaments, it is evident that No. 1 from the broch of Yarhouse and No. 2 from South Uist are clearly fourteenth-century types, as the first bears the IESVS

¹ The discovery of these brooches in a broch does not imply that they belong to the time of the early occupation of the building; it just shows that the structure had been utilised subsequently for shelter or occasional residence. The late occupation of brochs was clearly demonstrated by the recent excavation of the broch of Dun Beag, in Skye (*Proceedings*, vol. iv. pp. 119-27).

NAZARENVS formula contracted and blundered like most of the silver brooches of this period, and the second is decorated with crosses similar in character to some of those engraved on the silver examples, also its pin has the typical collar of the time. The brooch, No. 3, from the Culbin Sands may also belong to this period, though it may be a little later than the first two. The projections on either side of its pin are derived from the true collared variety, and the absence of a thickening at the front and back is accounted for by the thinness of the metal of which it is formed. The decoration of the ring, a running scroll very rudely engraved, does not assist us in dating the object. This motif, which is present in the ornamentation of Scottish metal work of the fourteenth and earlier centuries, as well as on some of the West Highland sculptured stones of the fifteenth century, is not seen on any of the silver brooches. While the two other examples from the Culbin Sands, Nos. 4 and 5, have collars on their pins, the ornamentation on their rings is quite different from that appearing on any of the other brooches which we have been considering. No. 4, with concentric wires attached to its front, is the only one of its kind which I have seen; but No. 5, which has closely placed radial lines incised on the face, is not so uncommon, as there are five more from the Culbin Sands in the Museum. These, unfortunately, have either lost their pins or have pins without collars. The ornamentation on Nos. 4 and 5 is not seen on any of the silver brooches, and thus we have to rely on the form of their pins for a clue as to their period. As the pins have collars, it is improbable that they are much later than the silver brooches, and although we do not know when this peculiar feature of the pin was discarded, it may be suggested that these two brooches belong to the fifteenth century, especially as the ornamentation on their rings does not occur on what we consider the earlier brooches. Some brooches which have deep radial grooves as well as incised lines on the front of the ring, and others which have radial grooves alone, are probably a later development of the last-mentioned variety.

When we examine the brass polygonal brooches, it will be noticed that they are made of thinner metal than the silver examples, and consequently the ridged sections are not so prominent. Three of the brooches have pins, but these are made of thin sheet metal and have neither a collar nor side projections. As for their ornamentation, three have foliaceous or curvilinear designs, the latter slightly resembling those on some of the silver brooches. The talismanic formulas do not occur on the brass examples of this class, but the three letters engraved on No. 6 seem to betoken a fourteenth-century date. The last brooch of this group, No. 10, is abnormal, inasmuch as it exhibits the flat and ridged sections of the angular brooches on a ring which is not quite

circular. The decoration of the front of the ring, however, consists of radial lines similar to those on No. 5, while that on the back, a single zigzag line on the flat panels, has not been met with during our inquiry. Probably this brooch may belong to the fifteenth century.

A brooch found at Urquhart Castle, Inverness-shire, and illustrated in fig. 6, No. 5, is of hexagonal form with concave sides, the front being decorated with radial or oblique incised lines. Its date may be fifteenth century.

The single example of the third type differs from those of silver in having only knops and no rosettes attached to the ring, the knops being plain and devoid of the small circular punch-marks of the others.

Of the simple wire brooch without attached ornaments, No. 12 has the typical collar on the pin, and No. 13 is an exact parallel to the silver example No. 40, one half of the ring being plain and the other half twisted. These seem to be fourteenth-century ornaments.

Reviewing the whole of the evidence, it is probable that the majority of the brass brooches belong to the fourteenth century and a few to the fifteenth.

Some of the most prominent features of these ornaments both in silver and brass continued to be reproduced in a more or less developed form in the Scottish brooches of the sixteenth, seventeenth, and eighteenth centuries. From the narrow flat ring brooch came the large Highland brooch with its broad flat ring. The overlapped joint persisted, as also the practice of ornamenting them with niello and foliaceous designs. In the case of the octagonal brooch the ring became broader, with the inner margin assuming a circular form and the outer margin showing concave sides. An example showing an early stage in this development (fig. 6, No. 6) was found at Urquhart Castle. The sides are alternately flat and ridged, but their outer edges are concave. The flat panels on the front bear the letters MV or VM. The talismanic formulas were discontinued, but were followed by a debased design resembling the letter N in Gothic form, repeated several times and placed closely together—a motive suggested by the earlier lettering. Three circular brooches of brass and one of silver bearing this motive, alternating with circular panels containing interlaced patterns, preserved in the Museum, seem to belong to the late sixteenth or early seventeenth century.

Returning to the Dumfries flat ring brooch with slightly projecting collets set with gems, which is of foreign origin, there is a group of large elaborate Scottish brooches which are directly descended from examples of its class. The Glenlyon brooch has a broad flat ring with long jewelled collets, projecting 1 inch from the ring, with the centre open but for a flat cross bar on which to rest the points of the pins, and the

formula IASPAR MELCHIOR BALTAZAR CONSVMATVM on the back. The long jewelled collets are seen in the brooch of Lorne and the Lossit and Lochbuy brooches, but the centre is closed with a large crystal. In the Ballochyle brooch we see the descendant of the octagonal brooch, only the outer margin of the sides are concave and its centre contains a large crystal.

There are also two other Scottish brooches, one of them combining



Fig. 7. Brooch from Culgower.

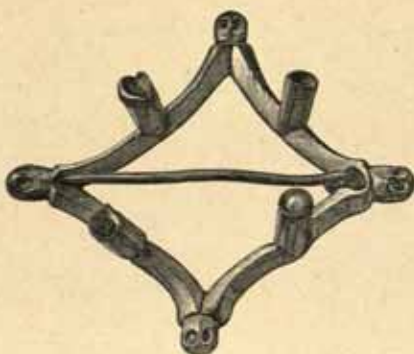


Fig. 8. Brooch from Scribercross.

the polygonal form with jewelled collets, which were exhibited to the Society forty-two years ago.¹ Both are made of brass or bronze. The first (fig. 7), found at Culgower, Sutherland, measuring $1\frac{1}{8}$ inch in diameter, was of circular form with alternate small and large projecting collets, some of which retained their settings of coloured glass or paste, and the second (fig. 8), found at Scribercross, Rogart, Sutherland, measuring 2 inches in diameter, was lozenge-shaped with incurved sides, with a projecting collet in the centre of each side, which had once contained a setting.

¹ *Proceedings*, vol. xvi, p. 402.

III.

REPORT ON THE EXCAVATION OF AN EARTH-HOUSE AT GALSON,
BORVE, LEWIS. BY ARTHUR J. H. EDWARDS, F.S.A.Scot.,
ASSISTANT KEEPER OF THE NATIONAL MUSEUM OF ANTIQUITIES.
OBTAINED UNDER THE GUNNING FELLOWSHIP.

The year before last, Mr John Morrison, tenant of the farm of Galson, and Mr Norman Mackay, his cousin, sent to the Museum as a donation a ring-headed pin of bronze, several shards of pottery, and a number of implements of bone and horn, which had been picked up at various times near the beach to the north of the steading. No record of any previous discovery of relics had been made from this locality, but from the nature of the finds and a description of the site given by Mr Mackay to Mr Callander, Director of the Museum, the latter, who had seen the kitchen-midden in 1914, was hopeful that excavation might reveal the existence of an earth-house. I therefore visited the site in May of last year, and learned, by making a few preliminary excavations at various points, that sufficient evidence of structural formation remained to justify my return in September in order to make a more exhaustive examination.

The farm of Galson is situated on the west side of the Island of Lewis, in the parish of Barvas, being a little more than $2\frac{1}{4}$ miles north-east of the village of Borge, 20 miles from Stornoway and 7 miles from the Butt of Lewis.

The site on which the various objects were found is a sandbank near the beach, situated on the seaward side of a wall at the bottom of a field known as the "Sand Park," somewhat less than a quarter of a mile north of Galson Farmhouse (fig. 1). The margin of the bank extended from the western corner of the wall in an easterly direction for a distance of 600 feet, where it turned to the south-south-east and followed the line of the wall inland for another 300 feet on a parallel with the South Galson River.

From the beach the bank rose at an angle of 40° , and at its highest point was about 25 feet above sea-level, but as the bottom of the slope is only 60 feet from high-water mark, it is exposed to the wearing action of the winds and waves during high seas in wintry gales. Further, owing to progressive subsidence, it appeared to be slightly terraced in parts, more especially towards the east-north-east, where its height was greatly diminished. The face of the slope was

strewn with boulders of various sizes, intermingled with bones, shells, and shards of pottery, while nearer the top of the slope could be seen a compact black layer of kitchen-midden refuse, masses of which had dropped off and fallen down as the loose sand underneath had given way. From its west-south-west termination the bank rose gradually at a gradient of 1-30, and the continuity of the kitchen-

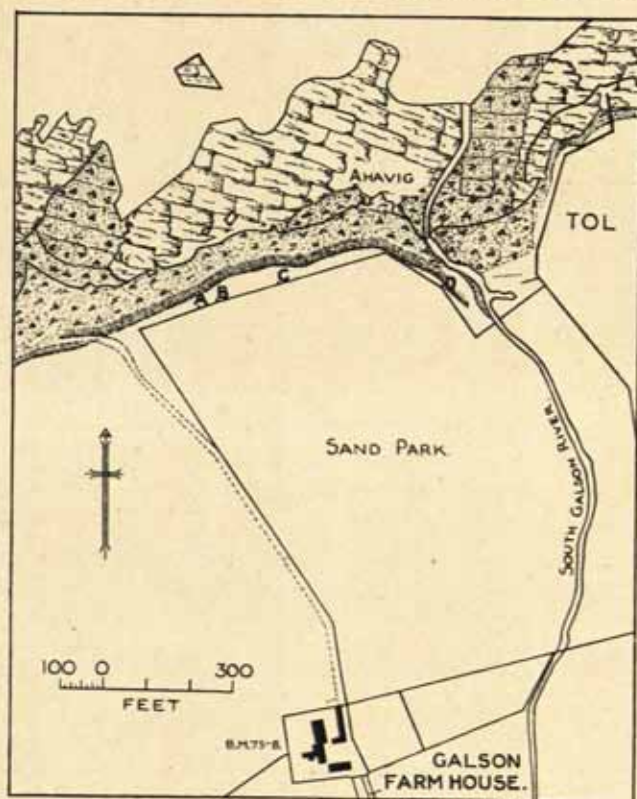


Fig. 1. Map showing relative positions of Structures excavated at Galson.

midden was uninterrupted, until at about a distance of 317 feet, at the highest point above sea-level, a break of 50 feet occurred, either due to the removal of sand for some utilitarian purpose or the effects of a severe storm. Further towards the east-north-east, although the line of the kitchen-midden remained unbroken, it was irregular and terraced owing to subsidence.

A vertical section of the bank at the highest point presented the following measurements:—

	Feet.	Inches.
Soil, grass grown, dark in colour	1	6
Kitchen-midden layer, a compact stratum of black soil, shells (mostly limpet), shards of pottery, bones of mammals and fishes, charcoal, etc.	1	2
Sand	2	0
Wall head of occupation level in chamber No. 1 of earth-house	4 feet 8 inches	from surface-level.
Floor-level of chamber No. 1	11 feet 2 inches	" "
Sand	12-14 feet.	

Inland, the kitchen-midden did not extend further than the line of the wall, but for a distance of 40 feet from its landward side, shards of pottery, mostly unornamented, could be obtained, and limpet-shells were numerous. As previously mentioned, the face of the slope was strewn with boulders of various sizes, many lying loose, and ready at a touch to roll to the bottom and mingle with the accumulated talus of stones, bones, shells, etc., but at several places the boulders were firmly embedded, parts only showing through the sand.

Four of these points were selected for excavation, A, B, C, and D on fig. 1. At A, about 142 feet from the west-south-west corner of the wall, there was found a good example of an open hearth, the floor of which was 5 feet below the present surface-level (figs. 2 and 6, A). The hearth, which was orientated nearly north-west and south-east, measured internally 3 feet 3 inches in length, and 1 foot 4 inches in breadth at one end, expanding to 2 feet 2 inches at the other. On three of its sides was a well-formed kerb of rectangularly shaped stones, which on an average measured 4 inches in height by about 4 inches in breadth, the longest, although split across, measuring 2 feet in length. The floor of the hearth was formed by a single oval-shaped boulder, nearly 9 inches thick, on the top of which was a layer of hard burnt clay intermixed with soot and charcoal, and as the oval-shaped hearth-stone did not fit into the corners, these had been packed with clay, as also were the joints between the rectangular stones which formed the kerb. In the immediate vicinity a few boulders remained *in situ*, those directly in line with the south-western side of the hearth being embedded in clay and the spaces between them filled with the same material. The area between the hearth and the boulders was covered with clay some inches thick, in which there remained bones, shells, mostly limpet, a few shards of pottery, and pieces of charcoal.

In North Uist, an oval hearth, with a border of thin slabs, found in the centre of a circular earth-house with radial walls, had a clay floor

inside the hearth itself and extending for some distance round about it.¹ From the second level at Traprain Law, a level which may be attributed to the fourth century, records of the existence of rectangular hearths have been obtained every year during the period the excavations have been carried on, and in some, where the stone used as a floor was thick, it was covered with a layer of clay to prevent it from being splintered by the heat.² Other hearths also were enclosed within a clay area,³

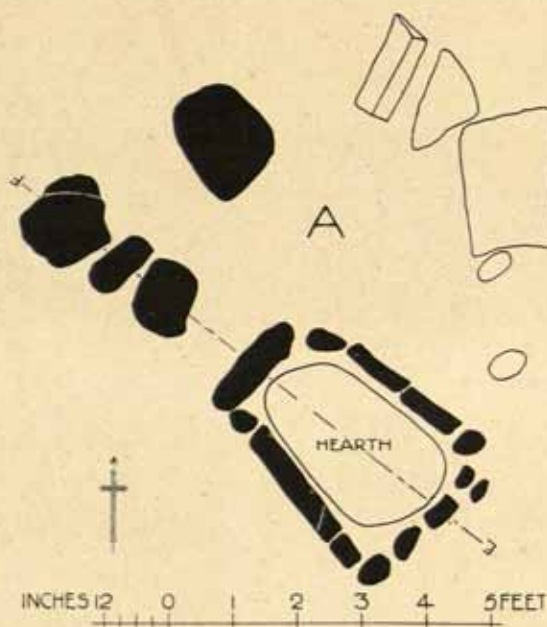


Fig. 2. Plan of Hearth at A on Map.

and in one instance the clay surrounding the hearth was so smooth and hard, that there was no doubt but that it had been a floor.⁴

At B, a distance of 186 feet from the west-south-west corner of the "Sand Park" wall and about 30 feet from the hearth, further structural remains were uncovered (fig. 3). These consisted of a small paved area, 3 feet 3 inches in length by about the same in breadth, and 9 inches in thickness, at one end of which was a small rectangular compartment with an internal measurement of about 3 feet 6 inches by about 1 foot 3 inches. The upright stones (fig. 6, B) which formed the sides of this compartment measured from 1 foot 6 inches in height to 1 foot 10 inches ;

¹ Erskine Beveridge, *North Uist, its Archaeology and Topography*, p. 126.

² *Proceedings*, vol. I. p. 75.

³ *Ibid.*, vol. lvi. p. 194.

⁴ *Ibid.*, vol. I. p. 78.

one of these, that on the north side, had fallen outwards, and is therefore not shown black on the plan. The floor in the interior of the compartment was lined with clay nearly 3 inches in thickness, but there were no bones, nor shards of pottery intermixed with the clay, neither was there any trace of charcoal; only a very few small limpet-shells remained, and these mostly on the surface.

During the process of removing the sand from the structure, part of

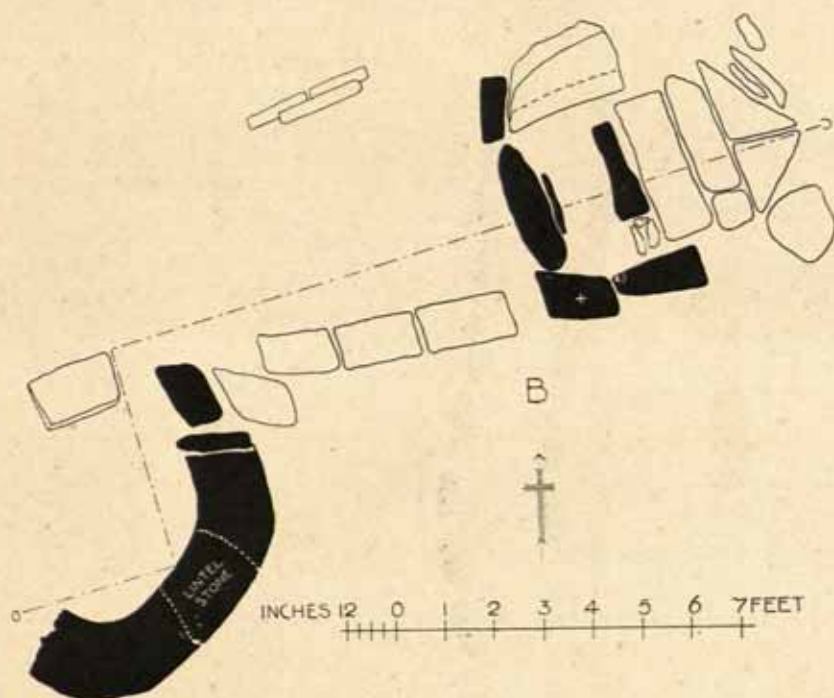


Fig. 3. Plan of Paved Area, Stone Compartment, and remains of Chamber at B on Map.

an antler of a deer, which had been sawn through in places, was found lying on the top of the heavy block of stone which formed the south-west corner of the compartment. From one side of this block, a single row of rectangularly shaped stones extended for 6 feet in a westerly direction, where the structure was terminated by a roughly built wall, 2 feet 6 inches in height and 1 foot 6 inches in thickness, which in shape formed the arc of a circle with an internal diameter of about 5 feet. At a point midway along the wall and lying exposed on the top was a large stone, rectangular in shape, which measured 2 feet in length, 1 foot 6 inches in breadth, and several inches in thickness. At the time

of excavation the particular significance of this stone was not understood, but, as after results showed, it was probably the lintel of a doorway, the entrance to a compartment of which the segment of wall remaining had formed a part.

The formation of the structure was unusual, but that the various parts were connected was apparent. The paved area, although now small in extent, may have been at one time much larger, and an analogy might be drawn from the numerous paved areas found at Traprain Law

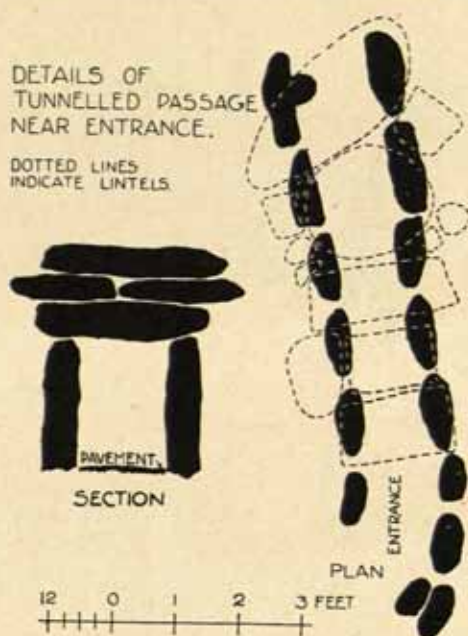


Fig. 4. Plan and Section of Subterranean Passage at C on Map.

near hearths of rectangular form, and settings of stones of oval or circular formation indicative of ruined dwellings. To what use the box-like compartment adjoining the pavement may have been put, unless as a small store chamber for food or fragile articles of pottery, cannot be ascertained, but at Traprain Law, on the second level and adjoining a hearth, a small oblong compartment, 8 inches in height and about 12 inches in width, was found to contain clay in a plastic condition,¹ and, although the compartment in the structure at Galson was somewhat larger, it may have been used for the same purpose, i.e. as a receptacle for raw clay.

Some time previous to my first visit in May, a drain-like entrance or passage-way had been discovered by Mr Mackay at C on fig. 1, about

337 feet from the west-south-west corner of the "Sand Park" wall and 157 feet distant from the structure at B. The stones which formed the entrance or mouth of the passage were clear of sand, and showed on the face of the slope about 6 feet below present ground level. During my visit in May, part of the structure was laid bare for a length of 9 feet, and the lintel stones of a subterranean passage exposed (fig. 4); the interior was cleared of its accumulated sand for the same distance and the floor found to be paved. At the entrance the passage measured 1 foot 6 inches in height and 1 foot 3 inches in width. As time did not then permit of a more exhaustive examination, I delayed further

¹ *Proceedings*, vol. xlix, p. 147.

excavation until my return in September, when I exposed the whole of the passage and found that it curved in a south-easterly direction for a distance of 22 feet (fig. 5). Here it ended, and only a few isolated boulders remained to prove that it had continued further; but more excavation in this direction was impossible owing to the danger of undermining the wall of the "Sand Park," which at this point was only a few feet away. The passage, which was paved throughout its entire length, varied from 11 inches to 1 foot 8 inches in width, with an

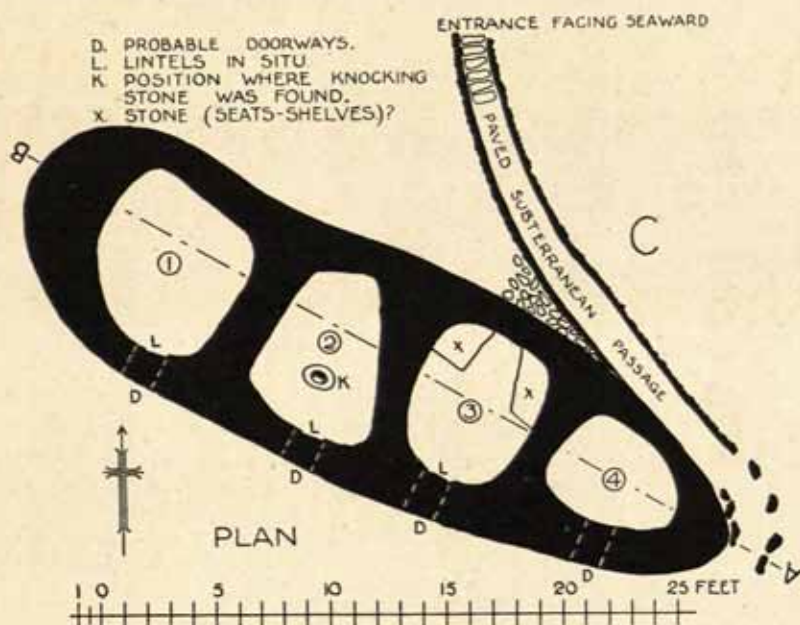


Fig. 5. Plan of Earth-house at C on Map.

average height of 2 feet. A section is shown (fig. 4) taken at a little over 11 feet from the entrance.

When clearing the last 7 or 8 feet of the south-eastern end of the passage (fig. 5), it was found that the western side for this distance abutted against the wall of another structure, and in clearing away the sand to expose this fully, an area of about 30 feet by 30 feet had to be dealt with. This new structure, when uncovered, was shown to be elongated in shape, with rounded ends. It measured 34 feet in length and about 10 feet 6 inches in breadth at its widest part, and lay with its long axis west-north-west and east-south-east. It consisted of four roofless, nearly oval or pear-shaped cells contained within an upright exterior wall of dry stone masonry, the average thickness of which was 1 foot

6 inches, except at either end and at the junctions of the partition walls with those on the exterior, where the thickness was increased.

The partition walls were also upright, and the dry stone masonry of which they were composed was well built; the thickness of each at a point taken near the centre varied from 1 foot 3 inches to 2 feet.

Chamber No. 1 (figs. 5 and 6) was situated at that part of the bank where it had its greatest height above sea-level, and where also the continuity of the kitchen-midden was broken. Below the surface, the

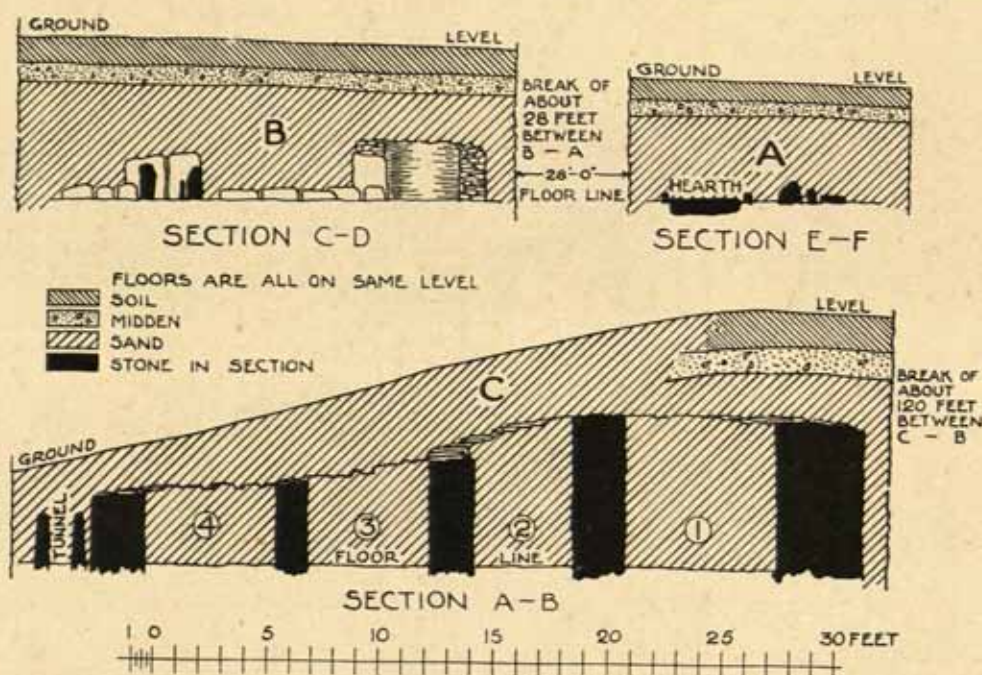


Fig. 6. Section of the various Structures at Galson.

wall head of the chamber was found at a depth of nearly 5 feet, and the floor-level at 6 feet 6 inches from the wall head. The chamber, which measured 6 feet 6 inches across at its widest part, had a floor of clay partly paved with flat stones, and in the south-west or landward exterior wall, about 3 feet from the top and set near to one corner, a lintel which measured 2 feet in length and 9 inches in thickness. A recess under the lintel, now filled with stones, seemed to have been a doorway or entrance. Near the floor-level there were found several pieces of iron slag, one fragment of which weighed nearly 10 lb., and a wedge-shaped piece of wood, while the floor itself contained numerous shells

(mostly limpet), a quantity of broken bones, shards of pottery, and charcoal.

Chamber No. 2, the greatest measurements of which were 7 feet 4 inches by 5 feet 8 inches, had a clay-lined floor with some paving, the depth of the floor from surface-level being 9 feet 6 inches, and the height of the partition walls on either side 6 feet 6 inches and 4 feet 6 inches respectively. A lintel, 2 feet 7 inches in length, 1 foot 6 inches in breadth, and 7 inches in thickness, was set near one corner of the landward exterior wall and a little over 2 feet below the present wall head. A slight recess below the lintel appeared to have been filled with small stones, but under each end of the lintel the bonded stones which had formed the jambs of a doorway could be seen (fig. 7). The clay of the floor was intermixed with shells (mostly limpet), broken bones, shards of pottery, and much charcoal.



Fig. 7. View of Chamber No. 2 from north-east, showing Lintel.

Near the centre of the chamber was found a large stone mortar or "knocking stone" made of hornblendite or hornblende gneiss, which measures 1 foot 6 inches in diameter externally and $7\frac{3}{8}$ inches in height; the hollow, which is nearly circular, measures 11 inches in diameter and $7\frac{3}{8}$ inches in depth, and tapers towards the bottom. The interior bears distinct markings where it had been struck with some hard implement which had been used as a pounder. The vessel was found embedded in the floor with only the lip showing above surface-level. Under it and round its sides, flat stones had been placed in order to prevent it from sinking into the loose sand below the clay floor. During the process of removing it from the chamber, part of the

lip fell away, and it appeared as if that part of the stone had been burnt. A number of rounded pebbles were also found, all of which had been subjected to the action of fire; these had most likely been used as pot boilers.

Although the "knocking stone" is a domestic utensil which has remained in use until recent times, that found in the Galson earth-house is one of the earliest to be recorded. From the broch of Cinn Trola in Sutherland,¹ three of these objects were obtained and are now in the Museum; in one of them, the cavity—as in the Galson specimen—tapers towards the bottom. There is no record, however, of the level from which these specimens came, and it is within the bounds of possibility that they may have been placed and used in the broch long after its original inhabitants had departed. A stone mortar, the bottom of which is rounded, was recovered from the third level at Traprain Law last year, a photograph and description of which is given in the article describing the excavations. The position in the earth-house floor of the Galson specimen, the fact that the lip of the vessel seemed to have been burnt, and the quantity of charcoal in its immediate vicinity, together with numerous round stones which had been heated, suggest that, in addition to its use as a mortar, it may also have served the secondary purpose of a vessel for boiling water by the dropping in of red-hot stones.

Other relics from the same chamber consisted of a stone pounder of fine-textured quartzose, measuring $5\frac{1}{2}$ inches in length and $2\frac{3}{4}$ inches in breadth, one end of which was worn and abraded, having been much used, and a piece of hard clay partly circular in shape, which if complete would have a diameter of $5\frac{3}{4}$ inches, the inner side being smooth and the outer rough and irregular, the thickness varying from 1 inch to $1\frac{1}{4}$ inch.

Chamber No. 3, which measured 6 feet 6 inches by 5 feet 6 inches, had its floor-level at a depth of 4 feet from the surface, the partition walls measuring 4 feet 6 inches and 3 feet 6 inches in height respectively, but it differed from the other chambers in that it had two slabs of stone built into the rounded corners of its north-west side at a height of 1 foot 4 inches from the floor, which perhaps served as seats for the occupants, akin probably to the raised dais found in a hut-circle at Grimspound, Dartmoor.² The slabs measured respectively 2 feet by 1 foot 8 inches by 7 inches, and 2 feet 8 inches by 1 foot 5 inches by 3 inches. In the space between the slabs and close to the exterior wall

¹ *Proceedings*, vol. ix. p. 53.

² *Trans. Devonshire Assoc. for the Advancement of Science, Literature, and Art*, 1894, vol. xxvi. pp. 101-21, Hut Circle, No. 16.

numerous bones of some large animal were found, nearly all of which had been broken in order to extract the marrow. About 1 foot from the present top of the landward exterior wall, a lintel, which measured 2 feet 6 inches in length, 1 foot 3 inches in breadth, and $4\frac{1}{2}$ inches in thickness, with a slight recess below now filled in with stones, formed, as in the other chambers, a possible means of entrance and egress.

The floor was of clay, with some paving, and there was much *débris* of bones and shells, with a heap of about eighty limpet and periwinkle shells gathered together in a small hollow at the base of the wall.

Among the relics found in the chamber were a chisel-shaped implement of bone (fig. 9, No. 3), which measured $4\frac{1}{8}$ inches in length; a sub-oval pebble of quartzite, $2\frac{5}{16}$ inches in length by 2 inches in breadth, slightly grooved on either flat face and with traces of discoloration made by the iron tool used to strike it to produce fire; three stone pounders, varying from $3\frac{7}{8}$ inches to $4\frac{5}{8}$ inches in length; and an object of hard-burnt clay which in appearance is like the handle of a vessel, measuring $2\frac{7}{16}$ inches in length and $\frac{9}{16}$ inch in thickness.

Chamber No. 4, which measured 5 feet 8 inches by 4 feet 4 inches, had no trace of a lintel in what remained of its exterior landward wall, which, however, was probably much reduced in height. The clay floor was found at a depth of 6 feet below surface-level, the height of one partition wall being 3 feet 6 inches and the other 3 feet. The interior contained quantities of broken bones, shells, shards of pottery, and charcoal, also two stone pounders measuring $5\frac{1}{8}$ and $4\frac{7}{8}$ inches in length respectively.

At D on the plan (fig. 1), 152 feet south-south-west of the east-north-east corner of the "Sand Park," part of the wall of a chamber of circular form was exposed at a depth of less than 1 foot below surface-level, but owing to its close proximity to the dyke further excavation could not be attempted. That part of the structure uncovered measured 1 foot 6 inches in thickness and 2 feet 6 inches in height.

Of the four structures excavated, that of the chambered earth-house was the most complete, but at present I am not aware of any similar structure from which one could draw an analogy.

It may be worthy of suggestion, perhaps, that to provide a means of intercommunication between the chambers the subterranean passage had formerly continued round the end of the structure at chamber No. 4, and, still hugging the exterior landward wall of the earth-house stretched as far as chamber No. 1. Openings in the side of the passage near the wall would correspond with the recesses under the lintels in the walls of the chambers, and enable the occupants to pass from one to another and in and out of the earth-house. There was no evidence

as to the manner in which the structure was roofed, and although in each chamber a quantity of stones was found, these were generally small, and certainly not pertaining to anything in the nature of slabs. It must be remembered, too, that the exterior wall and the partition walls were perfectly upright, the greatest height being 6 feet 6 inches, so that the idea of a beehive roof, such as covered the outbuildings at the broch of Jarlshof in Shetland,¹ seems to be precluded. On the other hand, the roof must have been made of a material sufficiently strong to bear the superincumbent weight of sand and earth. The interruption in the continuity of the upper layer of soil and the kitchen-midden above chamber No. 1, together with the fall of the bank at this point, suggest that the roof of the structure having been at some time uncovered during the process of the removal of sand, the roofing slabs and the stones of the walls laid bare were taken away, possibly for building purposes; and from the general appearance of the bank in the neighbourhood I am inclined to think this surmise correct.

Pottery.—In the vicinity of the various constructions excavated, and from the chambers of the earth-house, shards of hand-made pottery were recovered similar in texture and pattern to those found in the kitchen-midden. No complete vessel was recovered, but fragments were numerous, the majority of which were entirely plain, and varied in thickness from $\frac{3}{16}$ inch to $\frac{1}{2}$ inch; a sooty incrustation on many of the pieces pointed to their having been used as cooking vessels. In shape many of the unornamented fragments represented parts of globular vessels, with everted rims, flat bases, and bulging sides, a type found in many brochs, while other fragments were those of pots with straight sides, the lip being either flat, bevelled, or rounded, similar in section to the native pottery from Traprain Law.²

In comparison with the abundance of undecorated shards, the quantity of ornamented pottery recovered was small, and the variety of patterns few in number. Some of these are illustrated in fig. 8. The appliances that seem to have been used to effect the decoration were the finger-nail and finger-tip, as in fragments Nos. 2 and 15, a blunt-edged tool of rectangular shape, one side of which has been more deeply impressed in the soft clay than the other, as in No. 1, a pointed tool such as would produce incised lines, as in Nos. 3, 5, 8, 11, and a similar pointed tool or one which possessed both a point and a sharp edge, and which could be made to produce an indentation and a short dash, as in Nos. 6 and 7, while the small circular impressions were no doubt produced with a tube-like instrument, such as a hollow reed or bone, as in Nos. 12 and 13. Other types of ornamentation were the applied cable or zigzag shown in

¹ *Proceedings*, vol. xli. pp. 21-5.

² *Ibid.*, vol. xlix. p. 157, fig. 12.

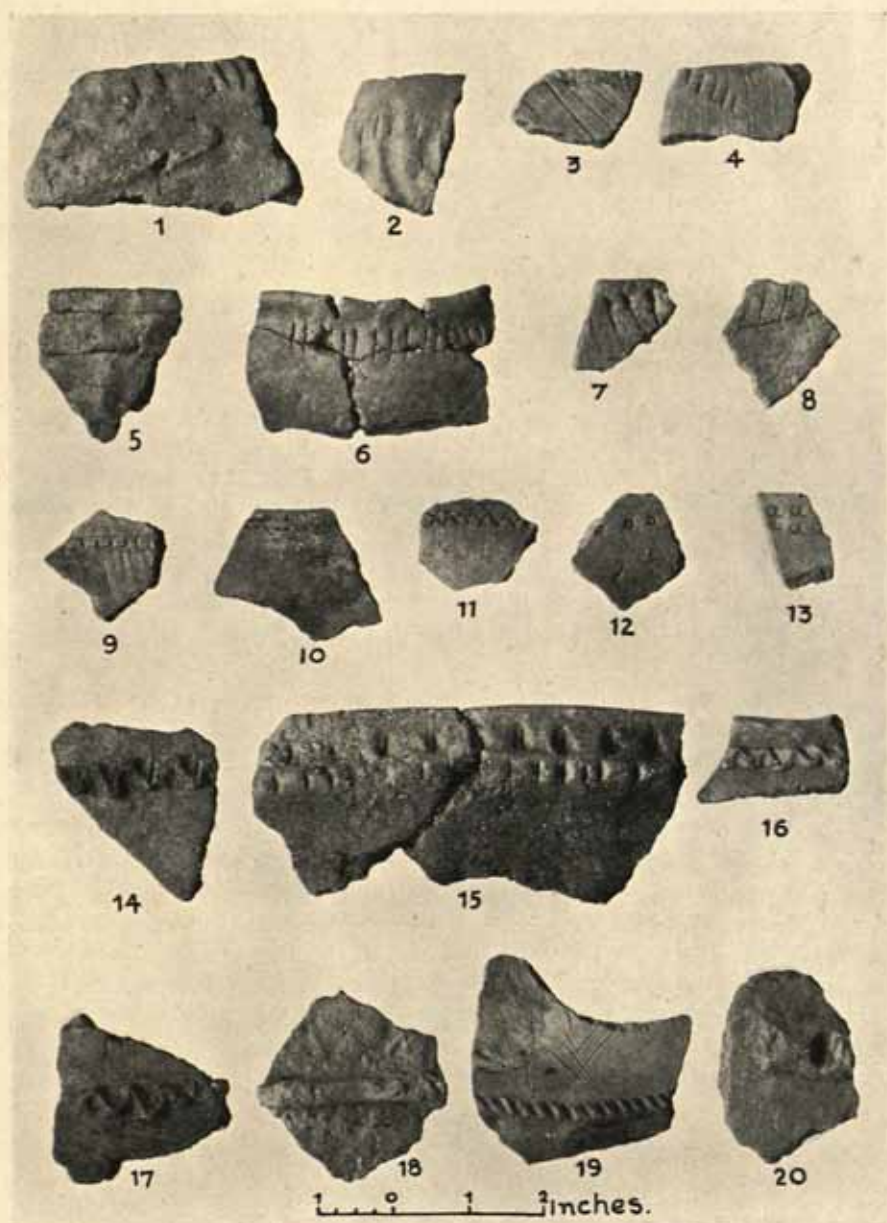


Fig. 8. Fragments of Pottery from the Earth-house and Kitchen-midden.

Nos. 14, 16, 17, 19, and a plain raised moulding, represented by a single fragment only, in No. 18. Pottery with similar ornamentation but showing a greater variety of patterns has been obtained from sites at Coll and Tiree¹ and North Uist,² and more recently from another kitchen-midden in Lewis, situated on the shore near the churchyard at Bragar. Fragments of clay vessels with the applied cable or zigzag ornamentation have been recovered from many sites in the outer islands, and appear to be common to those parts, but shards showing this particular kind of decoration have also been obtained from the broch of Dun an Iardhard³ and the broch of Dunbeag in Skye,⁴ the broch of Ayre in Orkney,⁵ and the broch of Yarhouse and the Everley broch, Caithness, fragments from the two latter being in the Museum, although not previously recorded.

RELICS FROM THE KITCHEN-MIDDEN.

Objects of Stone.—Part of the upper stone of a circular quern which later may have been adapted for some other purpose, measuring 5 inches by 3½ inches.

Small fragment of a cup of steatite, and several pieces of dark-coloured pumice with flattened surfaces made by rubbing.

Half of an oval-shaped stone measuring 2½ inches by 1½ inch, with a hole bored through the centre from either side.

Two halves of saddle querns were found in the talus at the foot of the slope.

Objects of Bronze.—A ring-headed pin of bronze, 5½ inches in length, the head, which is free, being of lozenge section and grooved longitudinally. The top of the stem is of rectangular shape, the front and the back being decorated with a lozenge pattern and having a punctulation in the centre. The front and the back of the stem are ornamented with an incised key pattern, the edge bearing two longitudinal incised lines. The stem of the pin curves towards the point. The ring head is broken at one side.

Stem of a bronze pin with free ring head, 3⅓ inches in length; it is much bent to one side. Similar ring-headed pins have been obtained from a Viking burial at Reay,⁶ from the broch of Okstrow, Birsay, Orkney,⁷ and also from a sandhill site in North Uist,⁸ together with patterned pottery and a weaving comb of bone, etc.

¹ *Coll and Tiree*, cf. pp. 174 *et seq.*

² *North Uist, its Archaeology and Topography*. Plates facing pp. 216, 238, etc.

³ *Proceedings*, vol. xlix. p. 68, fig. 13.

⁴ *Ibid.*, vol. lv. p. 129.

⁵ *Ibid.*, vol. xlviii. p. 46, fig. 12.

⁶ *Ibid.*, vol. xlviii. p. 297.

⁷ *Ibid.*, vol. xi. p. 85.

⁸ *North Uist, its Archaeology and Topography*. Plate (d) facing p. 230.

Objects of Iron.—Small iron knife with tang, total length $3\frac{1}{2}$ inches, with the remains of a wooden sheath still adhering to the blade.

Objects of Clay.—About half of an object of baked clay, probably a loom weight, measuring $3\frac{5}{16}$ inches in diameter and 2 inches in thickness, with an irregularly shaped hole through the centre, at the point of fracture; the hole is worn at either end as if by the friction of a cord. When complete, the object may have weighed about 1 lb. Part of a pyramidal or pear-shaped loom weight of clay, with part of the circular hole for suspension showing near the apex on the left side. This loom weight, when complete, probably resembled the two loom weights from Ravensby, Barry, Forfarshire,¹ each of which weighs respectively 1 lb. 10½ oz. and 1 lb. 7¼ oz. When complete, the Galson specimen may have weighed about 1 lb., but as only about a third remains it is difficult to estimate its weight.

Fragment of hard-burnt clay, $1\frac{1}{4}$ inch in length by $1\frac{1}{2}$ inch in thickness; on one side there is a smooth hollow as if it had been a mould, on the other side it is covered with a semi-fused vesicular substance which has been subjected to great heat.

Nodule of clay showing grass and thumb marks.

Objects of Bone.—Portion of a single-edged small-toothed comb (fig. 9, No. 9), measuring $1\frac{5}{8}$ inch by $\frac{7}{8}$ inch, formed of plates of bone clasped between two transverse plates with numerous small copper or bronze rivets on either side of the back; the end plates of the comb as well as the transverse plates are decorated with a series of small dot and circle ornaments, the same design appearing along the centre of the back.

Portion of a single-edged small-toothed comb of bone (fig. 9, No. 10), 1 inch in breadth. The edge of the back is concave and has a slot cut in the centre, following the curve of the edge.

Portion of another single-edged small-toothed comb, with a rivet hole (fig. 9, No. 11).

Eleven pins of bone (fig. 9, Nos. 13-23), measuring from $1\frac{1}{2}$ inch to $3\frac{29}{32}$ inches in length; in one of these, No. 18, which has a slightly expanding head, the upper part of the stem is encircled with a band of punctulations half an inch wide, placed irregularly, and in another, No. 17, round the cylindrical head are three large notches at irregular distances apart.

The pointed ends of three polished pins or needles of bone, measuring from $\frac{11}{16}$ inch to $1\frac{1}{4}$ inch in length.

Bone needle (fig. 9, No. 12), $2\frac{5}{16}$ inches in length, and the head of another, measuring $1\frac{1}{4}$ inch in length.

¹ *Proceedings*, vol. ix. p. 154.

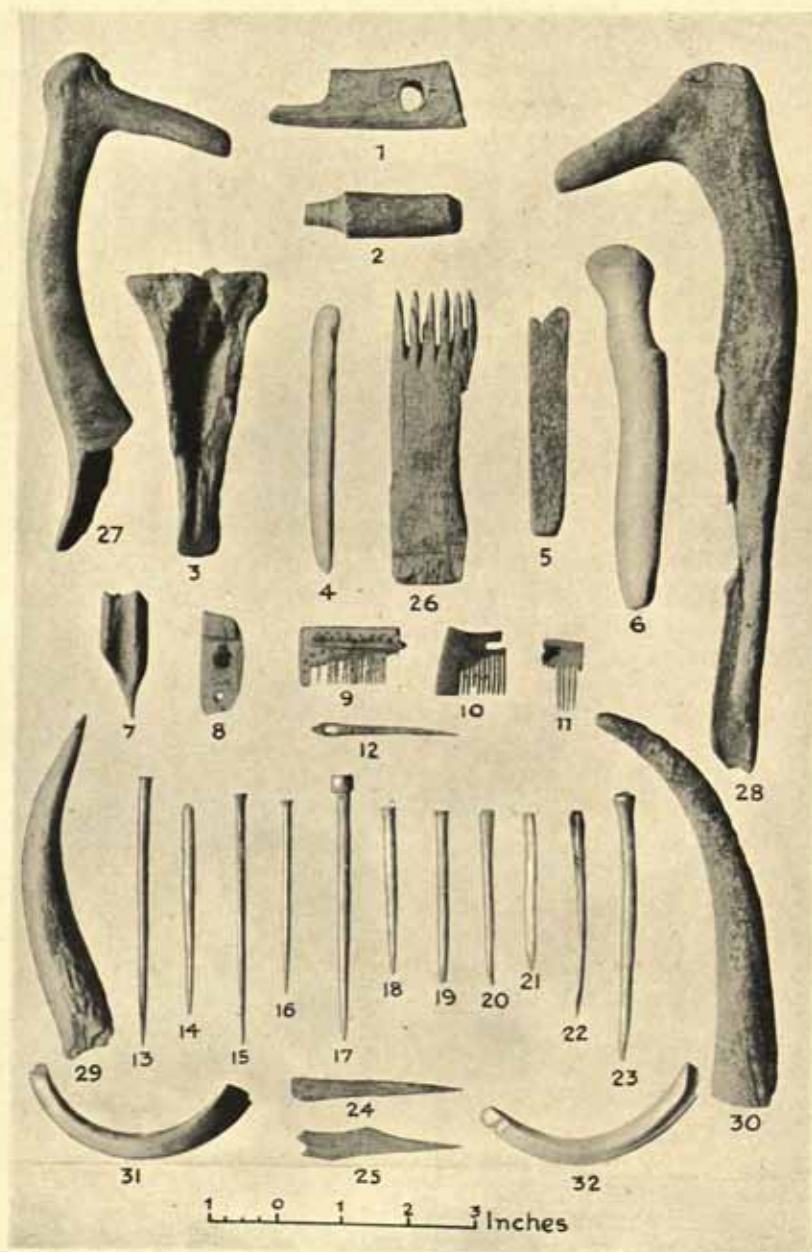


Fig. 9. Objects of Bone and Deer-horn from the Earth-house and Kitchen-midden.

Three bone borers, measuring from $1\frac{1}{16}$ inch in length to $2\frac{1}{16}$ inches; one of these, No. 7, measures $1\frac{1}{16}$ inch in length and $\frac{3}{4}$ inch in breadth, and may have been used as an awl.

Pointed implement of bone (fig. 9, No. 25), $2\frac{1}{2}$ inches in length, made from a splinter.

Bone implement, highly polished (fig. 9, No. 4), $3\frac{3}{8}$ inches in length, oval in section.

Bone object (fig. 9, No. 6), $5\frac{3}{4}$ inches in length, with a broad groove near one end worn by the friction of a cord.

Triangular plate of cetacean bone, $7\frac{1}{2}$ inches by $4\frac{1}{2}$ inches by 1 inch, flattened on one face.

Fragment of object of cetacean bone (fig. 9, No. 5), possibly the handle end of some implement, $3\frac{3}{8}$ inches in length.

End plate of an object of bone (fig. 9, No. 8), $1\frac{1}{2}$ inch by $\frac{5}{8}$ inch, with two rivet holes, one of which retains part of an iron rivet.

Also several pieces of bone showing evidence of having been sawn or cut.

Objects of Deer-Horn.—Weaving comb of deer-horn with six teeth (fig. 9, No. 26), measuring $4\frac{1}{16}$ inches in length.

Part of an object of deer-horn, with a broad groove caused by friction, broken across the narrow part of the groove (fig. 9, No. 2).

Pointed implement of deer-horn (fig. 9, No. 1), $2\frac{1}{16}$ inches in length, 1 inch in greatest breadth. The instrument has been hollowed longitudinally and the cancellous tissue removed. It is pierced transversely by large perforations near the broad end, possibly for securing a shaft. The point is now broken.

Deer-horn pick (fig. 9, No. 27), $7\frac{3}{16}$ inches in length. From the inside of the beam of the antler, which forms the handle, the cancellous tissue has been removed.

Deer-horn pick (fig. 9, No. 28), $10\frac{1}{2}$ inches in length, made from a shed antler. The tine, which forms the point, is worn smooth with use, and the cancellous tissue has been entirely removed from the beam which forms the handle. At about $3\frac{1}{2}$ inches from the base of the handle, a roughly cut hollow, now polished with use, has formed a convenient stop for the thumb when gripping the handle.

Two sections of deer-horn, $8\frac{3}{4}$ inches and $4\frac{5}{16}$ inches in length.

Numerous tines, and parts of antlers, showing cut marks and evidence of having been sawn; several pieces appear also to have been gnawed by some animal.

Four boar tusks; one (fig. 9, No. 32), measuring 4 inches in length along the curve, is split in half, and has a well-defined groove cut on the inner side near the pointed end, which has been broken.

Coin.—A silver coin of Eadgar (A.D. 957-75) was found in the kitchen-midden, near the ring-headed pin of bronze.

A consideration of the relics recovered must lead us to the conclusion that they differ but little from objects found in the brochs, and from numerous sites in Coll and Tiree and North Uist. From an earth-house at Kilpheder in North Uist,¹ patterned pottery, hammer-stones, iron slag, and the upper half of a quern cut down to a lozenge shape, were recovered; and from another earth-house at Machair Leathann,² also in North Uist, hammer-stones, iron slag, cetacean bones, a bronze pin, and the upper stone of a quern, all relics of a similar nature to those found at Galson. It is remarkable, however, that no spinning-whorls were found at Galson, although the presence of a deer-horn weaving comb and loom weights points to the manufacture and use of textile fabrics. The character of the building, the extent of the kitchen-midden, and the quantity of *débris* which remained were illustrative of the fact that the people who occupied the site were not temporary campers, but a people who had made a prolonged occupation, and who by force of circumstance were compelled to become hunters or fishermen as occasion demanded, and probably, when game was scarce, turned with equal relish to a diet of shell-fish or the doubtful delicacy of a stranded whale, the bones of which, moreover, would provide a large amount of material for the fashioning of various implements. They cultivated the land, and very likely used the deer-horn picks for stirring the soil. They had saddle querns for grinding the grain, and were well supplied with vessels of hand-made pottery for cooking purposes. A spark for lighting their fires would be obtained by striking the quartzite pebble with an iron implement, such oval-shaped pebbles with longitudinal grooves being well-recognised products of the Iron Age.

The discovery of a tenth-century coin need not be taken as indicative of the period of the earth-house; it was found in the kitchen-midden, away from the buildings, which are probably of earlier date.

The choice of site, too, is worthy of some comment. At Galson, the average distance between the moor proper and the beach is a little over half a mile, with grass-grown levels and undulating slopes, capable of cultivation in parts. The moor, broken by hags and nearly impassable in wet weather, would neither be suitable for habitation nor could it be cultivated, so that we find the people choosing a part of the coast-line on which to build their underground dwellings, perhaps necessarily underground, because the strip of land between the moor

¹ *North Uist, its Archaeology and Topography*, p. 116.

² *Ibid.*, p. 127.

and the beach would, without doubt, be the common highway at that period for enemies and friends, even as it is now, although modern usage demands a made road.

In conclusion, I have to thank Mr John Morrison for the generous hospitality and assistance he extended to me during the whole of my stay at Galson, and also to Mr Norman Mackay, whose keen interest and actual help in the arduous work of digging out the various structures during a period of most inclement weather, rendered the task easier and more pleasant than it might have been.

For the identification of the shells found in the earth-house and the kitchen-midden, I have to thank Mr E. Leonard Gill, M.Sc., of the Royal Scottish Museum, Edinburgh. These comprise:—

<i>Patella vulgata</i> (common limpet)	found in large quantities.
<i>Littorina littorea</i> (common periwinkle)	" " "
<i>Mytilus edulis</i> (mussel)	very few found.
<i>Pecten maximus</i> (scallop)	" "

IV.

ANCIENT BORDER HIGHWAYS: THE MINCHMOOR (CATRAIL) ROAD, THE WHEEL CAUSEWAY, THE ANNANDALE FOREST ROAD, THE WELL PATH, AND THE ENTERKIN. BY HARRY R. G. INGLIS, F.S.A.Scot., F.R.S.G.S.

Owing to their irregular formation, the Border hills offer only a limited number of direct passes through which roads can be taken, and, to understand their bearing on history, it is necessary to recognise that while there are perhaps a dozen open passes between north and south, there is only one really accessible highway between the east and the west—the Tweed valley. The twenty-mile-broad belt of hill and moorland which, starting at St Abbs, stretches down the centre of the Lowlands almost to Carlisle, forms a barrier across Scotland of such a character that in winter these hills effectually cut off the Lothians from Berwickshire, and Roxburgh from Lanarkshire, as well as from Northumberland and Cumberland.

It is obvious that with a barrier of hills almost 100 miles in length, and only one practicable route through them between east and west, the natural division of the country in early times must have been an eastern and a western kingdom. It was apparently the Roman legions who first created an artificial barrier, when they drew their military

boundary from sea to sea. When we find that with the withdrawal of the legions the wall was battered down, and the country soon reshaped itself into the eastern kingdom of Northumbria and the western kingdom of Cumbria (or Strathclyde), we realise that at one period these passes must have been the chief means of internal communication, while at another these same roads were the highways used for invading an adjoining country. Undoubtedly the fine Roman road which passed up the centre of Northumbria must have greatly strengthened and consolidated that kingdom, just as the Roman road to Carlisle must have aided Cumberland. But we have no similar relics of a road through Strathclyde to Dumbarton, and it is this possible line of road that is so difficult to locate.

The break-up of these rival kingdoms of Northumbria and Strathclyde prior to the Norman conquest, and the subsequent pushing southward of the Scots, coupled with the moving northward of the English, caused much strife through many centuries before the political boundary was finally drawn between Tweed and Solway, but it left the Scots with Berwickshire, Roxburgh, and Dumfriesshire cut off from the Scottish capital by a range of hills, and easily open to an English invader. Therefore the building of Roxburgh Castle, Jedburgh Castle, and Lauder Fort necessitated the keeping open of a road over Soutra to these places, and without doubt the "Malcolms Rode" of ancient charters, joining the Roman road at Newstead, may have had a military rather than an ecclesiastical origin.

Examination of the leading Border roads shows us that on Dere Street (the Roman road) there is no trace left of military defence (other than Roman camps) between Edinburgh and Woden Law, where a long breastwork cuts across the road and guards it against an invader from the south. On the Wheel Causeway, excepting a low turf dyke near Wheel, there are no defensive relics; yet a mile below, in the Liddell valley, a great embankment down the hillside points to an effort to bar this road against an invader from Carlisle. On the Teviot valley, between Langholm and Hawick, there do not appear to be any signs of defensive works on the hills about Moss-paul, nor are there any on the Annandale Forest road on the hills above Moffat, though there is the curious square enclosure at Little Clyde called "the Roman Camp." But on the Well Path above Durrisdeer, a massive square defensive fort, with a traverse on the north side, guards this pass from an invader coming from the south; while on the Enterkin, what appears to be a rifle pit overlooks and guards the pass against someone coming up.

But it is on the Minchmoor road that we see the strongest military

defences, for, guarding this road from an eastern invader, a strong breastwork, with the ditch in some places cut out of the rock, forms a long defence not only on each side of the road, but is carried across the river Tweed to Torwoodlee, clearly barring a large force from attempting to make headway into the west. Five miles to the west, along this same road, another strong breastwork, in some places double, defends it this time against an invader from the west, and though it is unlikely the two have any connection, it shows that formidable barriers were necessary on two occasions on this route.

THE MINCHMOOR (CATRAIL) ROAD.

On the range of hills between Traquair and Selkirk, the name "Catrail" has been marked on the Ordnance Survey Maps as a track passing along the ridge from east to west, and at the same time it is shown as turning north and south. It is unfortunate that this great mistake has ever got into print, for the two have no connection with each other. The Catrail runs north and south, while the east and west track is the ancient Minchmoor road (fig. 1), which is cut *through* the embankment of the true Catrail. This ancient road was the main highway between the east and west of Scotland *via* Peebles, used by Edward I. and mentioned in his *Itinerary*, as well as referred to in the State Documents in 1505, when a man was appointed to keep the road through Minchmoor from robbers for eight days each year at Roxburgh Fair (5th August). Its antiquity is also testified by the existence of a bridge over the Ettrick, in a line with it at Lindean, so far back as 1234, when the Justice Eyre met there; and it is quite possible that this may be part of the wagon road referred to in the Charters as leading between Kelso Abbey and Lesmahagow.

Starting from Lindean, every vestige of the road has disappeared on the grassy hillside, and it is only when we reach the hilltop at Linglee that we find the clear track of a road cutting through the earthen rampart of the Catrail. Looking to the right, we see the earthwork stretching down the hillside till it enters a marshy pond. To the left we can follow it up the hill—a strong defensive barrier actually cut deeply out of the rock, and forming a breast-high trench. Here is evidence of a strong force having been posted to keep an invader from the east from using this road; and as a similar earthwork lies across the valley of the Tweed and continues almost to the Gala, we have what appears to be a defensive barrier against every possible way of obtaining a passage to Peebles and the west. On the opposite side of the river Ettrick similar earthworks are visible descending from

Coldshiels Hill, so that this part of the countryside appears to have been at one time an important battle-ground in connection with this ancient highway.

After passing through the Catrail, the road continues uphill in an unmistakable line, the hard-beaten track being very evident as one proceeds; but three-quarters of a mile on, when crossing the shoulder of Peat Law, not only is the beaten track unmistakable, but alternative trails are visible on the surface. A quarter of a mile further, just over

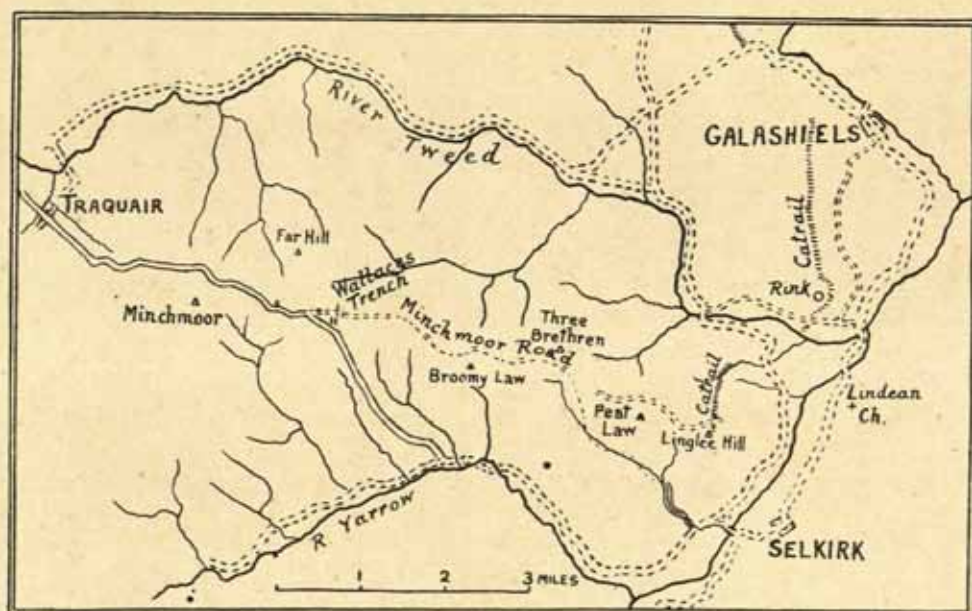


Fig. 1. The Minchmoor Road.

the highest point, are two stony pits on the hillside, so utterly different from anything met with along the track, that one could readily believe that at this point we are looking at the site of an ancient watch-tower, for the exposed position commands a view of the road for a great distance in both directions. A quarter of a mile further on the remains of a cairn stand close to the road on the right. On descending the hill to Red Nick, the road disappears altogether in the heather. Continuing blindly on, along the southern slope of Three Brethren, an almost obliterated track coming up from Philiphaugh is struck, and we are now on what appears to be the later road coming from Selkirk, which would come into use after the disappearance of the bridge at Lindean, when the Linglee road was abandoned. The three miles of road from

this point onwards to Wallace's Trench are all much of the same character, and it is quite remarkable that the line of road is seen clearly on the hillside, although one is not walking on what appears to be anything like a road. The grass seems to be of a different colour, yet the difference is only visible at a distance. As there are gates in the fences, it is comparatively easy to pick out the line of road when it disappears.

But it is on reaching Brown Knowe that the remarkable feature known as "Wallace's Trench" (fig. 2) becomes visible; for here is a fine breastwork 4 feet to 6 feet high right across the road. It is quite



Fig. 2. Wallace's Trench.

evident that at some period of history someone has had to defend this highway against an invader from the west, for the north end of the trench has apparently rested on a marsh, while the southern end of the earthwork has a second protecting breastwork of considerable dimensions on the steep slope of the hill to the left hand. That it was a defence against the west is shown by the presence of a shallow trench 65 feet back from the breastwork on its eastern side, only deep enough to drain away water. It would therefore appear that at some rainy season there was a regular encampment to bar the road. Whether it had any connection with the Catrail ($4\frac{1}{2}$ miles away to the east) is hard to say, but unquestionably the latter faced an eastern invader, this one a western foe.

Half a mile further on, the old road from Selkirk to Peebles (about 12 feet wide and only abandoned about 100 years ago) is reached, and the ancient road is covered up in this old grass-grown turnpike which, for the next $3\frac{1}{2}$ miles to Traquair, seems to follow its course. From this point it appears to have followed the valley of the Tweed to Peebles, probably on the south side of the river.

The only other point that one has to mention in connection with this road is, that $4\frac{1}{2}$ miles beyond Peebles is the Roman camp at Lyne, set at the junction of two valleys in such a position that its strategical purpose is not very clear. But unquestionably it looks as if the Roman camp at Newstead stood guard at one end of the hill-barrier, while Lyne camp looks as if it had been erected by a force approaching from the north in an attempt to break the barrier by attacking it from the rear. The distance by road from Newstead to Lyne is 30 miles, but it is only 24 miles in a direct line.

THE WHEEL CAUSEWAY.

How the Wheel Causeway (fig. 3) came to get this name is not clear, for not a trace of causeway is to be found in any part of this old highway. Its position, indeed, would have been more or less problematical were it not for the discovery of an interesting old map of the Scottish Borders drawn in 1590, which shows Wheel Causeway as a stretch of road somewhere near the ancient church and village of Wheel, close to the boundary between England and Scotland. A further reference to it appears in the Border Papers in 1585, where it is described as a mile within Scotland.

In 1917, the late Mr Adam Laing of Hawick and myself started out to follow the course of this road. Starting at Deadwater Station, near the headwaters of the North Tyne, we found a grass-track about 9 feet wide at the back of the adjoining farmhouse. Digging into it, nothing but virgin soil was exposed on the English side of the Border; it was no more than a beaten track. In a quarter of a mile it had faded away, and the only indication of continuation was at a right angle in the wall erected by the Duke of Northumberland (to define the real boundary between England and Scotland), where the signs of what looked like an opening in the wall having been built up, suggested that the road must have passed through it at one time. For the next half-mile Mr Laing and I traversed the gently sloping hillside at the foot of Peel Fell, in parallel lines, in the hope of striking some signs of a track such as was shown on the Ordnance Survey; but nothing whatever was visible. But as we neared Peel Burn a definite road became

visible (in a position nowhere near that of the road marked on the Ordnance Survey), and passed between a row of pits from 1 foot to 8 feet in depth, and from a few feet to about 14 feet in length. Coming upon these so suddenly on the hillside, one felt a sense of mystery as to their origin, heightened by the fact that they recalled in a slight degree the pits found beside Dere Street, as well as on the Annandale Forest road; but as they had no regularity or uniformity, there was every room for conjecture as to their origin. Subsequent inquiry, however, led to abandoning any theorising, for similar pits exist over the adjoining farm of Peel, and the limestone formation suggests they are caused by water. At the same time, it is remarkable that it is in this one place beside the road that they appear on the hillside.

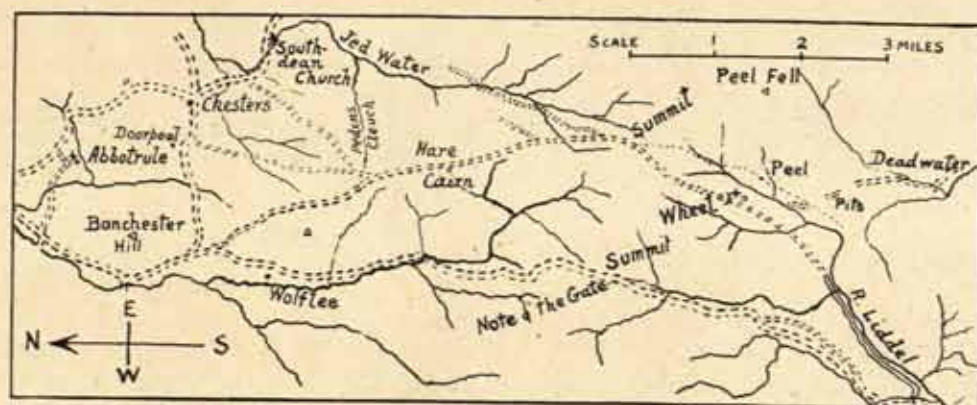


Fig. 3. The Wheel Causeway.

A little further on over the moor the road faded away, and was not again observable until we saw a perfectly definite line of descent to the little burn at the spot called "Bagraw Ford." Here the track was accentuated by its having been to some extent a watercourse in heavy rains, and it had just about enough width to take a cart. The burn at this point is quite small, and one can jump across without difficulty. On the ascent of the slight hill on the opposite side, after a few yards, nothing was visible of the road, and the only thing that might indicate its course was a faint depression on the ridge 50 feet above, which one might assume as being its probable course.

From this point onwards to Wheel there is little depth of soil on the hillside, and there is hard, firm ground at any point along the crown of the low ridge, so that on this land the road again faded away, though one naturally shaped a course to the present sheepfold, built out of the stones taken from the village and church of Wheel.

It is just at this point that a perfectly clear embankment—the only one on the whole road—becomes visible. It stands only $1\frac{1}{2}$ foot to 2 feet above the surrounding soil, but it is quite well defined, carrying the road across part of the hill that had no natural drainage. This, I think, is unquestionably the real "Wheel Causeway" referred to in 1585 and 1590, which antiquaries have given as the name of the whole road, but which from the documents referred to seems to have been little more than a definite place beside Wheel village.

The situation of this hamlet demands particular attention. Looking northwards, on the right are irregular mounds which cover all that remains of the almost forgotten village and church. Situated on the backbone of a low ridge just 1000 feet above sea-level, the ground falls away gently to a tiny rivulet on each side: to the east, Peel Fell stretches upwards, 1000 feet of steep, grassy slope; to the west, Dod Fell, about a mile away, is only 500 feet above; to the north, the grassy slope steadily rises in an easy gradient to the watershed at Wheelrighead, carrying the ancient road almost to the level of the surrounding hills. Southward the ground slopes easily downward to the Liddell Water, a little over a mile away. The land is not fertile, and its high altitude renders it useful only for grazing. There is nothing here to support any population, and the village has likely never been more than a place of call. The one remarkable feature is the wonderful spring of almost ice-cold water close by the church, which no doubt has been the primary cause of the existence of the chapel, and the village has risen in proximity. We shall notice again the existence of chapels by the way-side on the Annandale Forest road, as well as on the Well Path.

As we continue up the hill from Wheel in a long, easy gradient on the dry backbone of the ridge, after a very short distance the unmistakable signs of a turf dyke cross the road. Whether the embanked area is the remains of something permanent or is merely some old temporary erection is difficult to say, but it has all the appearance of being nothing more than a casual fence.

As the road at this point has crossed the 1000-foot level, cultivation has ceased, and the rank grass and boggy soil make the course of the road difficult to follow. It is quite evident that the road has been so frequently washed out that tracks have been made parallel to, crossing, and rejoining it all the way up, and even at present the true course is very indefinite. In this locality the soil has been so frequently washed away in sections across the road, that one can see that there has never been any paving, nor even an under-structure of heavy stones. The road at every point shows no signs of anything but being a beaten track over virgin soil.

As the road approached Wheelrighead it lay over an open moor. Wheelrighead on the right is little more than 100 feet above the road, while Neides Law, half a mile on the left, is about the same. This is only important as showing that this passage through the hills is so open that it could neither be blocked, nor could an ambush of any kind be laid, and therefore would be safer than the adjoining narrow pass of Note of the Gate.

Up to this point the road has been following a well-defined ridge, and has reached the watershed. Looking forward among the rounded grassy hills, one looks in vain for a definite objective. Ruberslaw—9 miles away—is visible, and the road seems to bend in that direction, keeping to the dry ground of the ridge. For the next mile the road descends across loose bogs, and is more or less visionary, but after crossing a burn it is more distinct on dry ground, and keeps fairly near the ridge for about 2 miles, passing a tumulus a mile on. Most of the way the road is quite well defined, and one has no difficulty in following it; yet occasionally it disappears, but is easily picked up. On reaching a wall at the neck between Pedens Cleuch and the Wolfhopeburn, the Ordnance Survey make a curious omission. The road is shown on the map as following the wall to the right, then bending sharply to the left to the summit of the hill at 1124 feet; but when one looks at the hill-slope, a perfectly clear and well-marked track goes straight up the hillside to the summit at 1124 feet. From this point the road continues on, making for Bonchester, joining the main road by Note of the Gate at Cleuchhead. The distance from the Scottish boundary at Deadwater to Cleuchhead is just 8 miles.

Having thus described the road as it exists to-day, one cannot fail to remark that the Ordnance Survey have planned this road on their map as coming up the valley in a straight line, like a first-class highway, curving round in a fine sweep that would suit a main line of railway. It is this mistake that has led antiquaries astray in regard to the real purpose of the road, for attention has been diverted from the perfectly plain facts by this fanciful line. For, when one reverses the route, and descends from Wheel Church along the obvious line of road down the ridge in a southerly direction, a perfectly well-defined road goes on, not to the left to Deadwater, but to the right, and without any difficulty whatever one finds oneself walking along a well-worn track, which, unhappily, the surveyors have marked "Catrail" or "Picts work ditch," and so misled a few generations.

What we have here in the Wheel Causeway is the main and ancient road from Carlisle to Berwick, referred to twice in the *Itinerary* of Edward the First. The route is a simple one. Going

from Carlisle up Liddesdale, no stream of any size is crossed after Kershope Burn, and the Liddell Water is crossed near its source. At Wheel the road keeps on the dry ridge, and, by following the line by Abbotrule, Jedburgh is reached without ever crossing a river. This, indeed, is practically the only possible way of reaching the at one time important seaport of Berwick from Carlisle, as the Northumbrian Hills lie so much across any route on the English side, and necessitate so many rivers to cross, that, perforce, the Jedburgh route is the only one possible. In this way, Jedburgh Castle and Roxburgh Castle lay associated as the barriers to Berwick, for they guarded this highway. With these two castles in English hands, soldiers could march freely from one town to the other. Were both in Scottish hands advance from either base was futile.

The true course of the highway known as the Wheel Causeway is therefore the well-defined track coming up from Newcastleton, leading to Wheel Church. The one leading to Deadwater and Tynedale is merely a branch road. Wheel Church would therefore appear to have had the same relation to Wheel Causeway as the chapel on the Annandale Forest road, above Moffat, had to that lonely highway, or the chapel near Crawford had to the Well Path.

As to the course of the road from the summit of Wheelrig to Jedburgh, one cannot help thinking that the present route by Bonchester was not the ancient road, for it is neither direct nor likely. But from the point mentioned at the neck between Pedens Cleuch and Wolfhopeburn the road divides, and one can follow a perfectly well-defined track *via* Lustruther and Abbotrule, which carries one forward without crossing any stream of size *via* Easter Fodderlee to Jedburgh.

Mr Laing and I, however, followed a faint but quite definite track to Doorpool, and one could imagine no difficulty in the road continuing on past Abbotrule Church to East Fodderlee, as this makes an almost direct and dry road to Jedburgh.

The Wheel Causeway therefore appears to be a portion of the ancient road from Carlisle to Jedburgh. At what date it was abandoned, and the road through the narrow neck by Note of the Gate was brought into use, I am unable to trace, for the earliest authority—Ogilby's *Itinerary* (1665)—gives us no detail of the route between Castleton and Jedburgh, and "Woolie," mentioned in it, is so near to both roads that it may be either route. As in 1604 the Wheel Church was united with that of Castleton, one would think that the road fell into disuse a little earlier than that period, for with the abandoning of the road or village the necessity for the chapel would cease.

THE ANNANDALE FOREST ROAD.¹

The golf-course above Moffat is intersected by what is locally called the "Roman Road," and while in the locality no doubt exists about its origin, the evidence is much more slender than is imagined. The late Dr James Macdonald, in the *Proceedings of the Society*, vol. xxviii., 1894, deals with this road in detail, so far as it is shown on the Ordnance Survey, and I propose to describe the road beyond the point at which he stops (fig. 4).

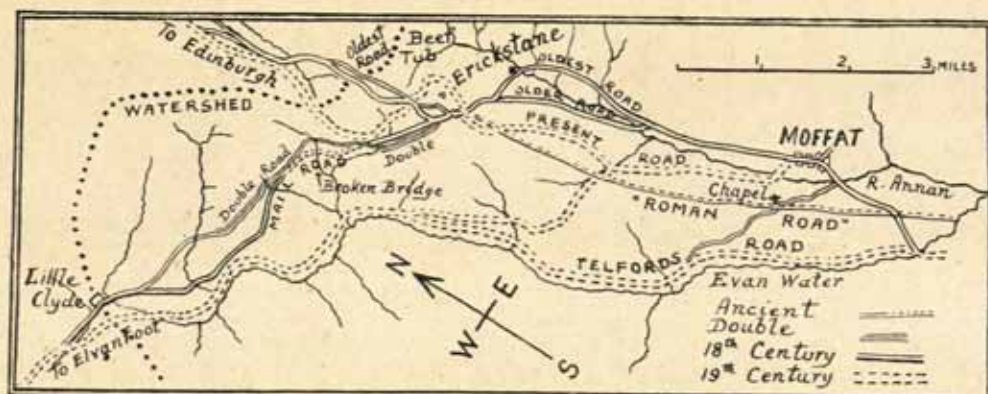


Fig. 4. The Annandale Forest Road.

At the road between Beattock and Moffat, passing between Loch-house Tower on the left and the Standing Stones close to it on the right, the road takes a straight course up the dry ridge, passing a small quarry, and then, between fences, to the golf-course. Here its line on the hard-beaten soil is unmistakable, and it continues steadily upwards with the ridge on the left, but on dry ground, to chapel. Here again, as in the Wheel Causeway, and a good many other old roads, we find an ancient chapel beside the road, built by the Knights of St John of Jerusalem. The road continues onward, well marked, on the grassy slopes, for a mile and a quarter, then bends to the right, crossing the Holehouse Burn exactly at the point where the moorland course of the stream ends and the rocky glen begins. Continuing onwards on a perfectly straight and decided course over Archies Hill, it now keeps on the ridge, uniformly 15 feet wide, and with pits at the side at regular intervals. Local information says that these pits were dug to obtain stones for the repair of the road; but as these pits are

¹ *Charter of Annandale Forest*, Nat. MSS., Scotland, vol. i. xx, "I forbid . . . that anyone go through the aforesaid forest unless by a straight road appointed" (A.D. 1124-53).

visible along Dere Street at many points where the ground is hard, this explanation does not seem to be adequate. Be that as it may, these pits are quite regular along this part of the road, but there are none further on, though the circumstances are quite similar. At the Auldhouseshielmoss the present main road from Edinburgh to Moffat is crossed, and from this point onwards the Ordnance Survey ceases to be reliable, for the old road can be seen quite unmistakably descending to the burn and rising up on the other side, crossing the present road again a quarter of a mile further on.

It is here that we can observe that there have been no less than four roads of different dates leaving Erickstane. (a) The first and most ancient is the ridge road we have been describing as "the Roman Road." Next came a road (b) through Moffat up the Annan valley to Erickstane Farm, then straight up the steep hill to this point. To ease this hill, probably about 1770, (c) a long gradual ascent from Bridgend made an excellent and comparatively easy climb, and this was followed by the construction of the present road (d) about 1820. All these meet at this point.

Striking up the hill to the left, we find ourselves almost immediately in a maze of roads crossing, recrossing, and obliterating one another, and it is really impossible to disentangle the one from the other until we find the key a mile further on, where the different types and widths are visible side by side. This enables us to say quite definitely that the first road went in a fairly straight course almost to the top of Erickstane Hill, and then forward almost straight to the edge of the Beef Tub, so close as to make understandable the story of the Highlander who escaped from his guard by wrapping himself in his plaid, and rolled over the edge down the hill. Here the ancient road crosses into Lanarkshire, and continues a hard-beaten track, 8 to 10 feet wide, below the grassy moor, a very short distance to the east of the old road shown in the Ordnance Survey at Tweedcross.

The second road zigzagged across the first road for a very short distance, then kept round the neck to the left of Erickstane Hill, rejoined the first at the Beef Tub, and then continued on a course a little lower down the hill than the first road, mostly 15 feet wide. The two unite just beyond Tweedcross and go on to Tweedshaws. A short distance further on, where the two separate, the oldest road strikes over the dry ridge to Tweedhope, while the later road keeps down the side of the hill to the left, fairly close to the present line of road. From this point onwards the present road and the old road cross and recross each other, but the general line down the valley is much as at present. Whether the road was always on the west side

or ever passed down the east side is difficult to decide; but the presence of Tweedsmuir Church on the east side of the river, and what seem to be appearances of tracks on that side, make one inclined to leave the matter open, for unquestionably the west side used now has the smaller streams, and would be least troublesome in winter.

Reverting to the road at Erickstane, where we leave the present main road, it is here that the one great problem of the road is presented. For, on the maps the "Roman" road does not go down the Tweed valley, but crosses the hills to Elvanfoot and Crawford, and continues down the Clyde valley towards Lanark. One would have expected that examination of the surface would have shown in which direction the road originally went, and that it would be seen that one road went straight on and the other was a branch. But the fork was in the form of a Y, and no evidence could be obtained from it one way or other.

From an antiquary's point of view, the western road presents a remarkable series of problems, because although there are nominally two roads shown on the maps, in reality there are three. For one of them is a double road at many points, sometimes touching, but on a slightly different level, as if it had been made as a supplementary track for some purpose. But before going into the details of this part of the route, let us make a survey of the district, and the point to which a road might be expected to lead.

Here is a range of hills nearly all 1500 feet high, and occasionally rising to 2000 feet, stretching across Scotland. There are only a small number of passes, and all ordinary traffic from Dumfriesshire must pass through one or other: Wheelrig, 1350 feet; Note of the Gate, 1238 feet; Limekilnedge, 1160 feet; Mossypaul, 890 feet; Eskdalemuir, 1100 feet; Birkhill, 1120 feet; Erickstane, 1330 feet; Beattock, 1028 feet; Well Path, 1290 feet; Enterkin, 1890 feet; Leadhills, 1530 feet. Of these, Erickstane, Mossypaul, and the Well Path are the only ones that give a fairly direct connection between northern and southern towns. Other passes are to be found without doubt, but none makes such a fairly direct and unmistakable highway as these three in which the traveller can go without fear of losing himself among the hills, and these passes must, from time immemorial, have been the highways between the north and the south.

It is the entire absence of this feature of directness that makes this road from Erickstane to the Clyde valley so perplexing, for one traverses it with a sense of complete bewilderment as to its direction. One feels lost among the hills. At one time it seems to be

making for the north, when it suddenly turns west, and one has to traverse five miles of track, sometimes on one side of a hill and sometimes on another, with no objective in view, crossing into different valleys, instead of keeping to one definite line. Contrast this with the simple route up Annandale, where the road follows an almost straight line to Erickstane, then goes straight forward into the next valley of the Tweed, and continues down it till Broughton is reached! I have not the slightest hesitation in saying that this western road to the Elvanfoot, from a topographical point of view, is an impossible main road, and from its position on the hills resembles no road of antiquity. Any traffic to Clydesdale and Lanark would go by the unmistakable and easy route down Tweedsmuir, and then by Broughton and Biggar to Lanark. I feel sure that this road is nothing more than a way to the lead mines at Elvanfoot and Leadhills from Annandale. Had this road primarily meant to reach the headwaters of the Clyde, it would never have taken such a winding course. It has clearly been an after-development, and one feels inclined to think that in the double road—which one can only conjecture may have been designed to keep apart the traffic going in different directions—some military hand has been at work at one time or another making for the Crawford district.

Reverting to the place where this road turns away from the Tweedsmuir road at Erickstane, the oldest part of the road strikes off in a north-westerly direction, and, on crossing the Lanarkshire boundary, at once becomes a twin road. This does not refer to the fact that the later road runs parallel to it, but that this particular road is double, and there are actually three roads side by side, consisting of the earliest road, 8 feet to 10 feet, its twin alongside, 8 feet to 10 feet, and lower down the mail road, 12 feet to 15 feet, abandoned in 1821 when Telford's road by Beattock was completed. At a small stream one mile on, the original road (8 feet wide) keeps up the hill, turning more northward, and descends to Rowantree Grain, where it turns direct westwards, merging shortly into the later mail road, whose separate course, curiously enough, is now almost entirely obliterated, while the ancient track is still quite clearly marked on the hillside. In fact, were it not for the remains of a broken bridge that can be seen a quarter of a mile lower down the burn, one could scarcely believe that the mail road had ever existed at this point. At the next burn—about half a mile further on—the roads separate, the mail road keeping lower down the hill, perfectly clearly marked, about 16 feet wide, and well engineered. The ancient road turns westwards, then north-west to the ridge, and it is upon this section that we see so plainly the two roads side by side—the lower of the two harder and with wheel marks, the other perhaps 6 inches higher, sometimes more, sometimes

less, but nevertheless two roads side by side (fig. 5). The distinctness of the two can best be seen on the ridge, where one goes straight through some muddy ground, whereas the twin road skirts the same spot.

Crossing the shoulder of Erickstane Hill, the road crosses into the Fopperbeck valley, and descends to the burn in a deeply-marked track. This is not its normal condition, but has been caused by having become more or less a watercourse, and each heavy rainstorm ploughs deeper into the soil. At the foot of the hill, on reaching the burn, there is no sign of a bridge or of anything of that nature of a river-crossing. On



Fig. 5. The double road—Moffat and Elvanfoot Road.

the ascent on the other side the road has been completely washed away for the first few hundred yards, and in the places where the washouts cross the track, there is no sign of paving or even bounding stones, such as were found on the Roman road; it is nothing more than a grassy, hard-beaten track. The road resumes its course up the shoulder of the hill, with signs at one place as if a second road had branched off uphill; but there is nothing to follow up, and there are no signs of any connection again further on.

A mile short of Little Clyde the ancient and the mail roads unite, the latter, 12 feet to 16 feet broad, well marked all the way from the last junction, and from this point onward all trace of the ancient track is covered up in its present width of 20 feet. This road is said to

continue on down the right bank of the Clyde to Lindsay Tower and Cold Chapel, and its course is quite visible; but here again, at every washout which crosses it, there are no signs of paving or stone foundation; nothing is to be found but firm, hard-beaten soil.

This course of the road down the Clyde valley is generally supposed to be one of the main routes in Scotland, but as it joins at Crawford the very ancient highway that led past Biggar and the Well Path to Durisdeer, Penpont, and on through St John's Town of Dalry to Minigaff and Whithorn, it is never likely to have been anything more than a connecting road between the two chief highways to Dumfriesshire.

There is one question, however, that will naturally be asked, What of the "Roman Camp" at Little Clyde, and what bearing has it on the road? In the absence of excavation one can say very little that is positive about it, but a cursory glance shows that two streams run through it. One of fair size, cutting off a small section and leaving it isolated from the rest, suggests that if it has ever been a camp, the choice of position has been amazing, for the dry ground lies to the south of the camp, and it looks much more like the protecting bank that had once been erected round a plantation to keep the cattle from the trees, such as can be seen in any part of the country. On the other hand, it may have been some hastily constructed rampart erected for a temporary purpose, and the break in the banks for the entrance and exits of both streams may not have mattered, but there seems to be on the north side signs of what might have been a traverse outside an opening in the rampart. This, however, may be accidental formation of the ground. Taken as a whole, one feels very sceptical about its having ever been a Roman camp.

THE WELL PATH.

One of the great highways of olden times was the direct road from Edinburgh to Whithorn in Galloway, and it is remarkable how much of it is preserved to-day as a hard-beaten track alongside or parallel to the present road. It is a testimony to the heavy traffic along it in ages past, that its course has hardly ever been obliterated even though it has been out of use for hundreds of years. From Edinburgh to Carlisle we are constantly observing its course beaten out on the shoulder of the Pentlands; above West Linton it is still in use as an old road, and two old bridges, one with an inscription, testify to its importance. As far as Biggar we are either on it or see its course beside us; at Lamington it is the same, and we only leave it when we cross the Clyde at Clydesbridge on the way to Abington; but it is still the farm-road that runs

beside the railway to Cold Chapel, beyond which the Clyde was forded between there and the Kirkton of Crawford, a mile before the present village. From this point it went straight up the back of the hill over to Elvanfoot—more than one course being still visible on the hillside—and then up the valley of the Powtrail to the col between Well Hill and Durisdeer Hill; on by Penpont, Tynron, Moniaive, to St John's Town of Dalry, and thence to Bridge of Dee; then, 9 feet to 10 feet wide, in a valley parallel to the present road at the back of Murray's Monument, to Minigaff, near Newton Stewart, where Queen Mary's Bridge spans the little stream. Much of this route is recognisable in the *Itineraries*

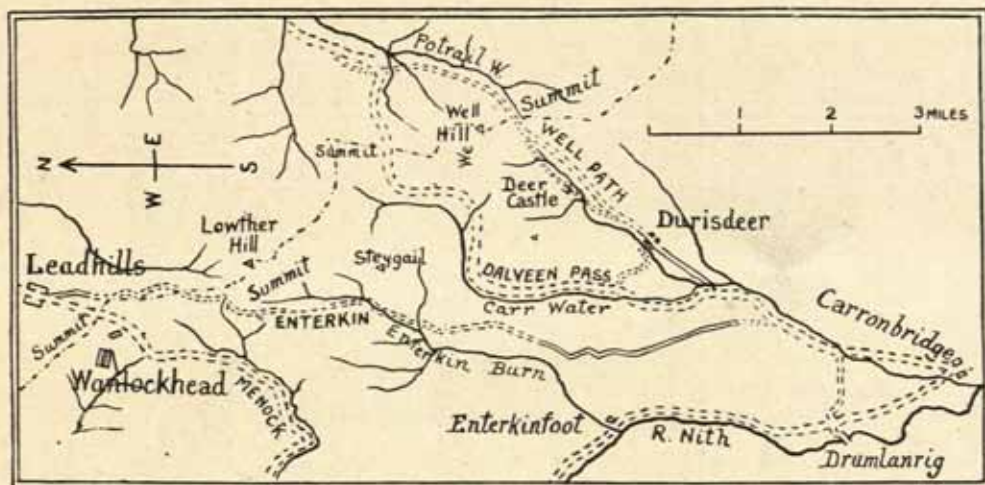


Fig. 6. The Well Path and Enterkin.

of James IV., and we find along it the record of ancient bridges erected at various dates, many of which have disappeared.

The chief point of interest in this road is undoubtedly the short length of road known as "the Well Path" between Durisdeer and Elvanfoot (fig. 6), where it crosses the watershed between Lanarkshire and Dumfriesshire at 1290 feet. Starting from the Durisdeer end, the present grass road makes a well-engineered ascent of the pass by an almost uniform gradient, and has all the appearance of a road made in the eighteenth century—probably one of the many benefactions of the Queensberry or Buccleuch families.

At the summit this excellent road ends, and we have here one of those unhappy transactions, where the splendid work accomplished by one proprietor was rendered almost futile by the adjoining landowner leaving the old road in its primitive state.

But it is in the ascent of this pass by the well-engineered road that we see below us on the other side of the valley the ancient track. It is a narrow way with diverging and converging subsidiary tracks, keeping to the dry ground on the west side of the burn. A couple of centuries have passed since it has been in use, yet its line is as clearly marked as it was in olden times. Looking across the valley, a curious phenomenon is observable, for the hills on the western side are green clad to the summit, while those on the eastern side are covered with heather. The old road kept to the clean, grassy side; the later road is cut through the heather.



Fig. 7. The Well Path and Deer Castle.

But it is a mile north of Durisdeer that the most interesting feature of the pass is exhibited, viz. the great earthwork known as Deer Castle (fig. 7). Here on the open hillside just above the road, and commanding it, is a massive rampart, square in shape, with an entrance opening to the north, guarded by a traverse. It is not near the summit of the pass, and one can only conjecture that it has been erected at some period for the purpose of preventing some force from the south passing along this road into Lanarkshire. Lower down the valley and opposite Durisdeer, a Deil's Dyke is marked as leading along the base of the western hill, but the local information is that this was a water-lead in connection with the old castle, opposite the village.

At the summit of the pass the Well Path strikes into the heather-land, and the road goes forward between banks 8 feet to 10 feet wide,

crossing various burns without bridges. The road itself, which is beaten hard but apparently not paved, is only about 7 feet 6 inches wide. There is, however, a well-built little bridge with a span of about 6 feet over the Cleuch Burn, with a road width of 12 feet. From this point onward the old road crosses and recrosses the present main road, but none of the bridges are ancient, and the old wheel tracks on such portions as are visible seem 4 feet 6 inches and the road itself about 7 feet 6 inches broad. Wherever it has had a washout no signs of paving are visible; it is merely a track with stones trodden in.

It is to be noticed that the road passes Durisdeer Church, Kirkton beside Crawford, and Cold Chapel, a mile beyond Abington.

THE ENTERKIN.

Since the opening of the road between Leadhills and Sanquhar by the Menock Pass, the Enterkin (fig. 6) has fallen into disuse, and at the present moment the eruptions of gravel on the sloping hillside are slowly covering up what at one time was an important highway in connection with the Lead Mines. Though little known to the general public, it has attained a fame far greater than almost any other valley, owing to the charming account of the Glen by Dr John Brown, in connection with the rescue of the Covenanted prisoners in 1684.

The path starts high up near the watershed from the bleak village of Leadhills with its clean, tidy houses, and passes the Smelting Mill. Although at points partly washed away, it is a firm, clearly-defined beaten gravel road 10 feet to 12 feet wide winding along the Moss, and overlooked by Green Lowther. In a mile and a half it becomes a grassy track, quite unmistakable on the hillside. At no point does the road coincide with the county or parish boundary which runs close beside it, and this in itself shows that the road has no antiquity, for had it been an old road, it would have been made use of as the boundary.

The levels at which the road proceeds make one realise that it must have been almost constantly in the mist, for, starting from the 1300-foot level at Leadhills, it climbs to 1750 feet at the county boundary, and at the summit below Lowther Hill it has reached 1890 feet. Here on a narrow col of grass-covered hillside overlooking the winding Menock Pass, the road suddenly bends over into the Enterkin, and we look down a steep, V-shaped, grass-clad valley, blocked at the end by a steep precipitous but green-covered hill—the "Steil Gail"—which seems to lie across the defile. The road can be seen steadily descending in an almost straight line, till it reaches the level of the burn at the foot a mile away.

The sides of the valley are not very steep, but the burn is about 300 feet below on the left, at the top of the pass, and if the grass is wet a slip might be serious.

The road at this point is 10 feet to 12 feet wide, but, further down, a hundred years of neglect has permitted the gravel of the shelving hillside gradually to slide over the highway, and at the scree—half-way down—the path is barely a foot wide, and at different points is scarcely passable, though one can easily scramble over the loose gravel. A mile down, on reaching almost the level of the stream which runs down the valley, a rocky bit of ground is encountered, and between two rocks, through which the road passes, it has never been more than 8 feet to 10 feet wide; it is here that tradition places the site of the rescue of the Covenanting prisoners.

On reaching the burn a little lower down, the road emerges from the narrow part of the Enterkin and goes forward along the flat bottom of the valley for nearly a mile, badly marked, and evidently crossing the burn several times, but on reaching Glen Valentine it strikes up the hillside again by a steep gradient to the ridge of the hill, and thereafter is a well-marked broad road again. Continuing along the ridge between the Enterkin and the Dalveen Pass, it soon merges into a modern road, and evidently has continued on towards Morton on the way to Dumfries.

Reviewing the appearance of the road and looking to its summit being 1890 feet above sea-level, its use in winter would be very limited, whilst its constant liability to mist and rain precludes it from ever having been an ancient highway in general use. Without doubt it has been a specially made road to carry the lead from the mines to Dumfries, or to the coast towns for shipment, and we may look on its age as being coincident with some effort to assist the disposal of the lead during one of the periods of activity, such as 1512. In a list of distances dated 1646, the road appears to have been the main highway between Douglas and Dumfries.

There is one historical note I should like to make in connection with this road in regard to the incident of the rescue of the Covenanters. At the summit of the pass and just where it turns into the Enterkin is a shallow trench or breastwork commanding the pass. Although nowhere near the spot where tradition assigns the rescue of the Covenanters to have taken place, it is in a remarkable situation for defence. Situated at the end of the mile-long one in six ascent, when the horses would be blown and the men spent (so that any sudden active movement would be almost impossible), the rifle pit is placed so that it would be invisible from the road until quite close, and retreat could easily be made in several

directions. The steepness of the hillside precluded any divergence from the road in the pass up which the soldiers would toil, and it would be almost impossible to spur a spent horse against the barrier, while there was no cover of any kind for a mile back to which the soldiers could retire. Looking to the position of the trench and breastwork, which fits in with the description of the actual events with far greater probability than the position of the traditional site, it would be interesting to find if by any chance tradition has fixed on the wrong spot for the scene of the rescue.

It is at the foot of the valley where the road passes between the rocks that tradition has stated the rescue took place; but one finds difficulty in reconciling the position chosen, for the horses would then be fresh to start the climb, retreat under cover was quite easy for the soldiers, while that of the rescuing party above would have been impossible, as they had no cover at their back. Indeed, at this point it would have been possible to send a detachment across the burn, and, ascending higher on the opposite hillside, render the rescuers' position untenable. At the top of the valley no such manœuvring was possible, and it is for this reason that the facts of the story are worth examining carefully.

MONDAY, 10th March 1924.

SIR ANDREW N. AGNEW, BART., Vice-President,
in the Chair.

A Ballot having been taken, the following were elected Fellows:—

WILLIAM EDMUND BELL, Solicitor, 13 Whitehall Terrace, Aberdeen.
Rev. GEORGE W. DALGLEISH, M.A., 6 Bellevue Terrace.
HARRY LEONARD DAVEY, Fern Villa, Stoke Park, Coventry.
WILLIAM HARDING, F.Z.S., F.R.G.S., Royal Societies Club, St James's
Street, London, S.W. 1.
WILLIAM KENNEDY of Low Glengyre, Kirkcolm, Stranraer.
THOMAS M'GROUTHER, Grange Lodge, Larbert, Stirlingshire.

The following Donations to the Museum were intimated and thanks
voted to the Donors:—

(1) By Dr R. C. CLAY, Manor House, Fovant, near Salisbury.

Small quantity of Grain, consisting of Wheat, six-rowed Barley,
cultivated Oats, and a few seeds of two kinds of *Bremus*, found in one
of the pit dwellings at the La Tène I. site at Fifield, Bavant, Wilts.

(2) By JAMES S. RICHARDSON, F.S.A.Scot.

Three two-pronged fork-like Implements of Bone, $5\frac{7}{16}$ inches,
 $4\frac{11}{16}$ inches, and $4\frac{1}{4}$ inches long, from a kitchen-midden on North
Berwick Law, East Lothian. (See *Proceedings*, vol. xli. p. 424.)

Fragments of hand-made decorated Pottery, from the "Teampull"
near Chicken Head, Stornoway, Lewis.

(3) By R. C. CAMPBELL RENTON of Mordington, through J. HEWAT
CRAW, F.S.A.Scot.

Two Bronze Spoons and an Iron Knife, found with a man's skeleton
and pig bones in a grave at Catch-a-Penny, Burnmouth, Berwickshire.
(See previous communication by J. Hewat Craw, F.S.A.Scot.)

- (4) By Dr FRED. J. TURNBULL, 6 Randolph Place.

Old Dental Drill of Ivory and Steel, $4\frac{1}{2}$ inches long, with crutch-shaped swivel head.

- (5) By the Rev. J. KING HEWISON, D.D., F.S.A.Scot.

Collection Ladle of Oak, from Galloway.

Four Communion Tokens of Rothesay.

- (6) By Major H. SETON LEFROY STEIN, late second in command, 6th Batt. Rifle Brigade (Prince Consort's Own), grandson of the Donee of the presentation.

Silver-gilt Punch Bowl, of hemispherical shape, with domed foot, $6\frac{1}{2}$ inches in height and $11\frac{1}{4}$ inches in diameter. Beneath a single moulding round the rim is an applied band of grape vine ornamentation in the Rococo style, $1\frac{1}{4}$ inch wide, which is repeated round the foot, $\frac{7}{8}$ inch wide. On the side of the bowl is the inscription—FROM/ THE NON-COMMISSIONED OFFICERS AND PRIVATES/ OF/ THE CLACKMANNANSHIRE YEOMANRY CAVALRY TO/ ROBERT STEIN OF KILBAGIE ESQUIRE/ THEIR LIEUTENANT/ AS A MARK OF THE STRONG FEELING OF GRATITUDE AND AFFECTION/ WHICH HAS BEEN UNIVERSALLY EXCITED IN THE CORPS,/ BY/ HIS EXTREME ZEAL AND UNREMITTING ACTIVITY/ AS AN OFFICER/ AND HIS KIND AND FRIENDLY CONDUCT/ AS A GENTLEMAN/ 28 FEBRUARY,/ 1820. Edinburgh hall mark—1819-20. Weight, 64 oz. 14 dwt. Maker, J. W. Howden.

Silver-gilt Punch Ladle, the bowl $2\frac{3}{8}$ inches in diameter at the mouth and $1\frac{1}{16}$ inch in depth, the stem $14\frac{3}{8}$ inches in length. The bowl, which is of circular squat shape, is slightly constricted under the rim, swelling out and recurving into a flattish base, the bulging side being encircled with a band of applied grape vine ornamentation similar to that on the bowl. The stem, which is made in two fusiform sections, the one at the end longer and thicker than the other, bound together by a screw, at its junction with the bowl assumes the form of double vine leaves and bunches of grapes, from which a tendril winds upwards round the stem. For a distance of $1\frac{3}{4}$ inch the latter is encircled by a series of plain and milled bands. Some $3\frac{1}{2}$ inches beyond this it is plain, with a leaf design $\frac{3}{8}$ inch broad at each end. The upper end of the stem has a vine tendril wound round it, with the applied figures of three galloping mounted yeomanry. The top terminates in a thistle head with three leaves, of which one is wanting; below these are two pronounced mouldings encircled with pellets, with a deep cavity between. Hall marks the same as on the bowl. Weight, 7 oz. 9 dwt.

- (7) By the Rt. Hon. THE EARL OF BALFOUR, VISCOUNT TRAPRAIN of Whittingehame, through the Excavation Committee.

Relics found during the excavations on Traprain Law in the summer of 1923. (See subsequent communication by James E. Cree, F.S.A.Scot.)

- (8) By D. LAUGHTON, Greens, St Andrews, Orkney, through HUGH MARWICK, M.A., F.S.A.Scot.

Symbol Stone with the Mirror-case Symbol, the Crescent and V-shaped Rod Symbol, and Mirror Symbol, all incised, found at Greens. (See subsequent communication by Hugh Marwick.)

It was announced that there had been acquired through the King's and Lord Treasurer's Remembrancer:—

Two Early Seventeenth-century Spoons and a Walking-stick Top of Silver, found with 351 coins of Edward VI., Mary of England, Elizabeth, James VI., and Charles I., at Irvine. (To be described in next volume by J. Graham Callander.)

The following Donations of Books to the Library were intimated:—

- (1) By HIS MAJESTY'S GOVERNMENT.

Calendar of Treasury Books, 1685-9. Vol. viii. Parts 3 and 4.

- (2) By JOHN IRVING, F.S.A.Scot., the Author.

The Story of the "Great Michael."

- (3) By A. FRANCIS STEUART, F.S.A.Scot.

Mœurs Intimes du Passé (VIII^e Série): Education de Princes (Du Grand Dauphin au Prince Impérial). Par le Docteur Cabanès.

- (4) By DONALD A. MACKENZIE, F.S.A.Scot., the Author.

Scottish Pork Taboo.

- (5) By W. DOUGLAS SIMPSON, M.A., F.S.A.Scot.

The Norsemen in Alban. By Robert Locke Bremner.

- (6) By R. L. MACNEIL of Barra, F.S.A.Scot., the Author.

The Clan Macneil, Clann Niall of Scotland.

The purchase of the following Books for the Library was also intimated:—

English Industries of the Middle Ages. By L. F. Salzman, M.A., F.S.A.
 Mediæval England. A New Edition to Barnard's Companion to English History. Edited by H. W. C. Davis.

The Early Iron Age Inhabited Site at All Cannings Cross Farm, Wiltshire. A Description of the Excavations and Objects found by Mr and Mrs B. H. Cunnington, 1911-22. By M. E. Cunnington.

The following Communications were read:—

I.

DORNOCH CATHEDRAL: THE HIGH CHURCH OF CAITHNESS.

By W. DOUGLAS SIMPSON, M.A., F.S.A.Scot.

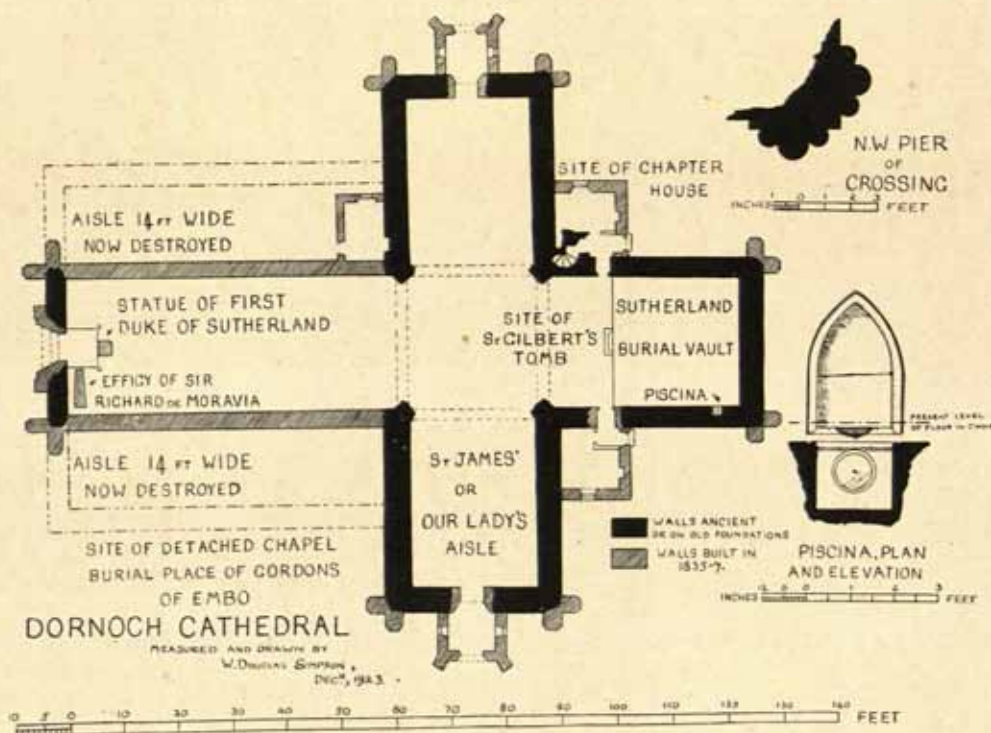
This important church, whose septcentenary will be celebrated this summer, has been so maltreated by the well-meant "restoration" of 1835-7, that its ancient features have been largely obliterated, and what survives is concealed in such fashion by harling and plaster that it is not always easy to distinguish old masonry from new.

The diocese of Caithness, including all Scotland north of the Dornoch Firth, was founded by David I. Originally its cathedral centre was at Halkirk (High Church), in the remoter or Norse part of the diocese. The unwisdom of this choice was evidenced in the savage treatment received by two of the early prelates at the hands of the half-Viking populace, who in 1201 blinded Bishop John and cut out his tongue, and in 1222 roasted his successor, Bishop Adam, to death on his own kitchen fire. Accordingly, Bishop Gilbert de Moravia (1223-45), by whom the reorganisation of the see was effected, removed its High Church to Dornoch—a place which, already possessing popular sanctity through its association with Celtic St Finbar, had the additional advantage of being more in touch with Lowland influences.¹ Architectural evidence shows that the work of building must have commenced soon after Bishop Gilbert's advent in 1223.² In its complete state the church (see

¹ For the early history of the diocese see my *The Castle of Kildrumny: Its Place in Scottish History and Architecture*, pp. 40-7.

² The cathedral was sufficiently far advanced in 1230 to receive the bones of the murdered Bishop Adam, which were translated thither from Halkirk and interred with full solemnities—*Chronica de Mailros*, ed. J. Stevenson, p. 150.

plan, fig. 1) comprised nave of four bays, with aisles, transepts, choir, and a central tower. It was dedicated to the Conception of the Blessed Virgin Mary, but after-generations preferred to know it as St Gilbert's Church. Little documentary evidence is available with regard to the earlier history of the building. In 1291, Edward I. made a gift from the forest of Darnaway of forty seasoned oaks for the fabric of the church.¹



In 1570, the town of Dornoch was stormed and given to the flames by the Master of Caithness and the wild Mackays of Strathnaver. The cathedral was wholly burned except the tower, in which the burghers held out for a week. On this occasion the tomb of St Gilbert, who was buried beneath the crossing at the entrance to the choir, was broken open and his bones scattered.² Further damage was done to the ruins by a great storm on the night of "Gunpowder Treason," 5th November 1605,

¹ *Rotuli Scotie*, vol. i. pp. 5-6.

² Sir Robert Gordon, *Genealogical History of the Earldom of Sutherland*, pp. 156-7.

which blew over the north arcade of the nave.¹ Between 1614 and 1634, under the Caroline episcopacy, the cathedral was partly repaired, the choir and transepts being re-roofed, while the ruined nave was partitioned off and abandoned to decay.² In 1728 the present steeple was built.³ In 1775 a grant of £300 was obtained from Exchequer towards the repair of the church, and thereafter lofts were introduced in the choir and south transept, doors reached by outside stairs being hacked through the ancient walls. The roof was ceiled, and a wooden floor put in at a higher level.⁴ The condition of the church as thus restored is shown in an engraving by William Daniell, dated 1813,⁵ while the ruined nave is illustrated by Charles Cordiner in 1795.⁶ So matters remained until 1835-7, when the cathedral received a thorough restoration according to the ideas of the time. The nave was rebuilt without aisles, the remains of which, including the noble south arcade shown by Cordiner, were complacently cleared away. The other portions of the church were thoroughly repaired, refaced, and the whole brought to a smug uniformity by a liberal application of tame ashlar, harling, plaster-work, and yellow-wash. A mock vaulted ceiling in stucco was introduced in all four parts of the church. In the chancel a burial vault was contrived for the Sutherland family.⁷

As a result of these operations, the only conspicuous fragments of ancient work now visible in the interior of the church are the four great piers and bearing arches of the tower (fig. 2). The piers are square on plan, uniting with the adjoining walls on two faces, and having on each of the others a cluster of three half-engaged shafts, one large central one flanked by two smaller ones. The central shafts (as now coated with plaster and yellow-wash) are 14 inches in diameter, the lateral ones 7 inches. The square arris of the pier emerges between the two clusters. These shafts carry bell-capitals, rising from a rolled astragal into a square form corresponding to the abacus, whose lower edge is turned off in a broad splay.⁸ Over the large middle shafts the square parts of the bells and the abaci are slightly keeled centrally. All these impost

¹ Sir Robert Gordon, *Genealogical History of the Earldom of Sutherland*, p. 255.

² *Ibid.*, pp. 309-10, 346; Sir William Fraser, *The Sutherland Book*, vol. i. pp. 222-3, vol. ii. pp. 16, 339.

³ H. M. Mackay, *Old Dornoch: Its Traditions and Legends*, pp. 94-5. Mr Mackay thinks that the present spire dates only from the restoration of 1835-7, but it is clearly shown in Daniell's engraving of 1813.

⁴ *Ibid.*, pp. 111-3.

⁵ Reproduced in *The Sutherland Book*, vol. i. p. 13.

⁶ *Remarkable Ruins and Romantic Prospects of North Britain*, vol. ii.

⁷ For the restoration see *Old Dornoch*, pp. 137-42; also Hugh F. Campbell in *Trans. Aberdeen Ecclesiological Soc.*, 1891, pp. 39-41.

⁸ The effect in appearance, though not structurally, has something of the character of the double impost so often observed in early Byzantine architecture.

mouldings, from astragal to abacus, are continued round the square edge of the piers. The four pointed bearing arches are of two orders. The inner order, rising from the central shaft, has a plain flat soffit chamfered at the angles, the splayed surfaces thus formed carrying

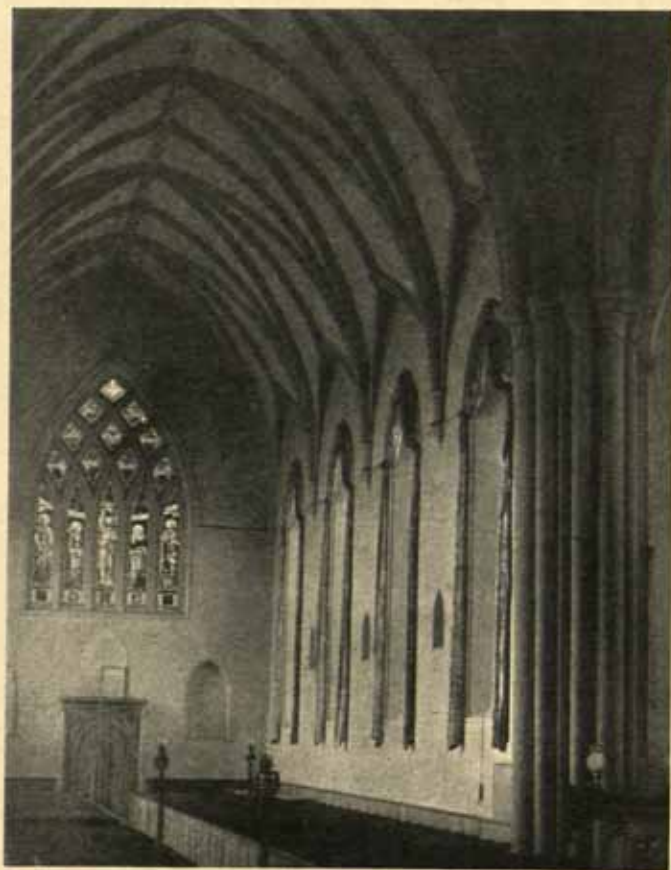


Fig. 2. Dornoch Cathedral: North-west Pier of Crossing, and West Window of Nave.

sharply-pointed quirked bowtells. The outer order, rising from the lateral shafts, has similar bowtells flanked by hollow mouldings. Modern pavement conceals the bases of the piers.

The tower carried by these piers and arches is now of two floors, the upper one being at the parapet level and beneath the broach spire. A newel stair, 2 feet 2 inches wide, placed in a semicircular tower in the angle between the choir and the north transept, leads up to the

tower. It has been thought that this stair is modern,¹ but the architectural evidence does not support this view. The stair is constructed partly in the thickness of the choir and transept walls immediately behind the adjoining pier. Once the great tower was built, any subsequent attempt to dig out the masonry here in order to provide a stair would have resulted in a catastrophe; nor would there have been any reason for such an operation, as a stair could easily have been built entirely outside. The whole character of the newel stair is ancient, and on the outside of the circular tower, near the top, are visible weathered dressed stones, wrought to the curve, of a character totally different from the tame ashlar-work of 1835-7. Bishop Pococke, who visited the cathedral in 1760, has left us a short description of it as it then stood, in which he makes a curious mistake in describing the "eastern part" as ruined and the "body or nave" as still in use.² In Scotland more usually it was the choir which was abandoned—a fact which doubtless led Pococke into error about Dornoch, where the converse took place. Under this misapprehension, Bishop Pococke describes a round staircase tower at the "south-west angle of the middle part"; and, as it is clear he had the church turned round about in his mind, the stair referred to is obviously that now existing in the north-east corner. It has fifty-three steps, and thereafter a modern straight stair in wood leads to the lower floor of the tower. The staircase (fig. 3) has a flat leaded roof and is lit by pointed windows.

The tower measures about 23 feet square within walls about 3 feet thick. In the lower floor, each face has a large oblong bay narrowing outwardly to a pointed window, with a plain outer splay having a fillet round the exterior. The upper floor, at the springing of the spire, is a little above the level of the ancient floor here, which is indicated by rough corbels. Below these are the springers of massive splayed ribs spanning the tower from east to west in order to strengthen the floor. The masonry of the tower is much obscured, but seems to be partly-coursed rubble with dressed quoins in freestone. On the inside there is a course of freestone ashlar work about 2 feet 6 inches above the lower floor. Round the spire (fig. 3) is an allure walk 2 feet broad, paved uniformly with flat stone flags and protected by a parapet about 3 feet 6 inches high, having a moulded cope without embrasures. There are corner bartisans similarly finished. The parapet is borne by a plain

¹ *Old Dornoch*, pp. 108, 140.

² *Bishop Richard Pococke's Tours in Scotland*, ed. D. W. Kemp, p. 168. Curiously enough, the same mistake is made by Cordiner, who describes the ruined part as "the altar end," and, following Cordiner, by Capt. J. Henderson, *General View of the Agriculture of the County of Sutherland*, 1812, plate facing p. 187.

corbel-table of single members in two breaks, and continuous corbellings carry the bartisans. Plain grooved runnels are provided for the drainage, but are not now in communication with the roundway. Originally the latter would no doubt be paved in the usual fashion, gutter stones discharging by the runnels being set alternately with stones wrought to a central ridge and sloping on either side.

In the west gable of the nave is a large window (fig. 2) of five pointed lights beneath a pointed general arch. Unfoliated intersecting tracery

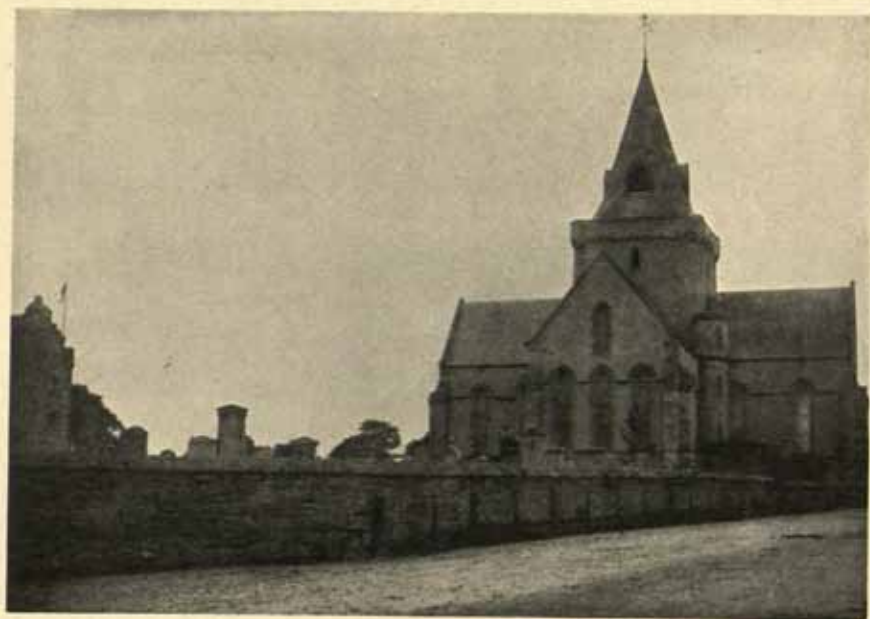


Fig. 3. Dornoch Cathedral: View of East End.

(The tower of the Episcopal Palace is visible to the left.)

fills up the general arch, and is formed by the mullions branching into two, each branch being continued archwise up to the window-head. Exteriously and within, the mullions and tracery carry a half-engaged central roll set on a flat surface flanked by shallow hollows. The same mouldings are continued on the jambs and general arch. A window with five lights and basket tracery of the same type is shown here in Cordiner's engraving, but the style of dressing and appearance of the stonework of the present window suggest that it was rebuilt at the restoration. At that time certainly it was shortened by the introduction of a porch in the lower part of the gable, and its original proportions,

as shown by Cordiner, were thus entirely destroyed. Below it, on the inside, a marble tablet bears the inscription:—

THIS
 ANTIENT CATHEDRAL
 HAVING
 FALLEN INTO DECAY AND RUIN
 WAS RE-EDIFIED
 DECORATED AND RESTORED
 TO RELIGIOUS SERVICE
 BY ELIZABETH
 DUCHESS AND COUNTESS OF SUTHERLAND
 IN THE YEARS
 MDCCCXXXV, VI, & VII.
 THE LORD IS IN HIS HOLY TEMPLE
 PSALM XI.

At present the transept gables show each a window of three pointed lights with a circular window above and a porch below. So far as the north gable is concerned, this was not the ancient arrangement, which is shown in Daniell's drawing and consisted of two pointed lights with a third above. Three lights with a fourth above, all most beautifully proportioned, are preserved in the east gable of the church (fig. 3), which is very dignified.¹ An offset round the interior walls of the chancel, and continued round the transepts, might be thought to indicate the level of the old work retained at the restoration. On the other hand, there seems to be ancient rough-cast masonry of small-work exposed through the harling on the outside north wall of the choir at a higher level. The offset inside is about 7 feet 6 inches above the present floor level in the transepts, and 5 feet above the present floor level in the chancel. Both floors have been raised, the chancel floor being above the Sutherland burial vault.

Near the east end in the south wall of the chancel a fenestella contains the piscina (see measured drawing, fig. 1). The niche has a pointed arch 2 feet 10 inches high, and is 1 foot 9 inches wide. Its moulding is a half-engaged roll set on a chamfer, and is continued down the jambs and also along the sill of the piscina, which is below the paving of the present floor. The basin, set centrally, is 10½ inches in diameter, rather shallow, with a medial drain, and is surrounded by a flattish roll moulding. On

¹ It is perhaps worth noting that the same arrangement is found in the chapel window at Kildrummy Castle, also built by Bishop Gilbert. But it would be unwise to attach too much significance to this similarity, for at Kildrummy the upper window is a mere light to the roof-timbers, and, moreover, in its present state is not original work. See my *Castle of Kildrummy*, pp. 88-90, 129; also *Proceedings*, vol. liv. p. 138.

the west jamb, inside the arch, a fragment of older sculptured work, much weathered, has been used.

For the lost aisles of the nave, which were 14 feet wide,¹ the only authorities seem to be Cordiner's picture and the brief notes of Bishop Forbes and Bishop Pococke. The latter says: "In the eastern [*sic*] part, now uncovered, there are four arches on each side supported by round pillars with a kind of Gothic Doric capital." Bishop Forbes, who visited Dornoch on 3rd August 1762, speaks of the "West End" as "ruinous; only the Gable End and the two side Walls, with the 5 South Pillars, including the two in strong Basso Relievo in the two Gable-ends, are still standing."² The south arcade as shown by Cordiner answers to these descriptions, plain cylindrical piers with square bases carrying on simple capitals plain pointed arches having splayed mouldings—all very like the nave arcade (1424-40) of St Machar's Cathedral, Aberdeen. The clerestory windows were square-headed with round rear-arches, and the aisle windows, apparently of a single light, had plain round arches. At the west end of the aisle was a plain pointed door. One pier of the north arcade is shown by Cordiner as still erect, and is of multangular form, with a late capital.

At the eaves all round the building are grotesque gargoyles. It has been suggested that these are modern,³ but except for the four pairs beneath the skew-putts of the gables, and one on the choir nearest the round staircase, they are evidently mediæval. Their whimsical effectiveness and vigour contrast utterly with the docile character of all the restoration work. The five modern ones are quite different in treatment, and lack the spirit of the others; they are also less weathered.

The interior measurements of the church are as follows:—length, 123 feet; breadth over transepts, 89 feet; length of chancel, 34 feet; breadth, 23 feet 9 inches; length of transepts, 30 feet 8 inches; breadth, 23 feet 7 inches; length of nave, 60 feet 10 inches; breadth, 24 feet 10 inches.⁴

Within the church, at the west end of the nave, is preserved the effigy, formerly in the choir, of Sir Richard de Moravia, brother of Bishop Gilbert. He fell fighting against the Norse at the battle of Embo, about 1245.⁵ The effigy (fig. 4) is a fine though mutilated specimen of the sepulchral art of the thirteenth century. Sir Richard is shown in recumbent posture, clad *cap-à-pie* in the armour of the period. His

¹ *Origines Parochiales Scotiæ*, vol. ii. part ii. p. 623.

² Dr J. R. Craven, *History of the Episcopal Church in the Diocese of Caithness*, p. 236.

³ *Old Dornoch*, p. 143.

⁴ Mr Campbell (*Trans. Aberdeen Ecclesiological Soc.*, 1891, p. 41) gives the height of nave and chancel as 45 feet, and that of the spire as about 120 feet.

⁵ *Genealogical History of the Earldom of Sutherland*, pp. 32-3.

hauberk, of which the links have not been sculptured, is covered with an ample surcoat, reaching in graceful folds to just below the knee. The neck and armholes are wide, and the latter are prolonged downwards to a point. The border seems to be a plain ribbon. A close camail, drawn up over the chin, envelops the head, the upper part of which is broken off. On the left side, just below the break, is a raised fillet which may be a head-band or the rim of a basinet. The features are wholly defaced. The right arm is broken off just below the shoulder; the left was concealed beneath a shield, now almost destroyed. The right leg, of which



Fig. 4. Dornoch Cathedral: Effigy of Sir Richard de Moravia.

the lower part is gone, has been crossed over the left leg, and has a plain garter below the knee. The left leg is complete save for part of the foot, which is garnished with the knightly prick-spur. Round the waist of the figure is the sword belt, showing a series of clasps or buckles. It droops to the sword, which lies from right to left across the wearer's middle. The sword is now much battered, but has a straight blade, downward quillons, and a heavy globular pommel. A small plain cushion supports the knight's head, and his feet rest on the back of a lion *couchant*. The effigy, which measures 6 feet 11 inches long, is in freestone, wrought with great spirit. The sarcophagus, rough-hewn out of a single block of freestone, is 7 feet long, 2 feet 4 inches wide at the head, 1 foot 9 inches wide at the foot, and 1 foot 4 inches in height.

The great piers and arches of the crossing are undoubtedly Bishop Gilbert's work, and date from the early thirteenth century, or soon after his consecration to the diocese in 1223. Their clustered shafts and the bold pointed, unfileted rolls and deep cavettos of the pointed arch-mouldings are typical of the fully-developed, but still early First Pointed style; while at the same time the square abaci retain the influence of the preceding Norman style. All this work is bold in conception, and the handling is masterly—fully equal to the best Transitional work anywhere else in Scotland. Bishop Gilbert would take a close personal interest in the building operations, and Sir Robert Gordon tells us how "all the glasse that served this church when it was built, was maid by Sainct Gilbert his appoyntment beside Sideray [modern Cyderhall] two myles by west Dornogh."¹

In substance the tower above may belong to the same period; but the parapet, with its bartisans resting on continuous corbels, is clearly much later work. This part of the tower was no doubt altered at the time of the Caroline restoration. The coping of the parapet may have been erected, in place of earlier merlons and embrasures, when the steeple was rebuilt in 1728. All these features are shown exactly as now in Daniell's engraving. The clock is dated 1897.

The continuous, flattish mouldings of the piscina, and a certain want of vigour in its treatment, suggest a late pre-Reformation date; and the same inference may be drawn from the tracery of the west window, which is of a common fifteenth- or sixteenth-century pattern. This fact, together with the late character of the nave arcade as illustrated by Cordiner, strongly hints that the body of the cathedral was not completed until long after Bishop Gilbert's time.²

All the rest of the building seems to be modern, or modernised beyond recognition, and is in the worst possible style of nineteenth-century anæmic Gothic. Any other ancient masonry that may exist is concealed beneath the exterior harling and the liberal coats of plaster

¹ *Genealogical History of the Earldom of Sutherland*, pp. 6, 31. This statement of Sir Robert is of some interest in view of the suggestion made by Mr F. C. Eeles, F.S.A.Scot., that mediæval glass was probably not made in Scotland (*Proceedings*, vol. xlix, p. 91).

² A bond of manrent, given by William Sutherland of Duffus to Alexander Gordon, Master of Sutherland, dated 4th September 1529, assigns as a penalty to be paid by Sutherland or his heirs for breaking "ony punt of the premisses," a sum of £500, "to the operation and edification of the cathedrall kirk of Cathness" (*The Sutherland Book*, vol. iii, p. 94). A date about this period would well suit the style of the nave arcade and west window. But, on the other hand, the sum might have been payable to a general repair or maintenance fund, such as that provided for by Bishop Gilbert in his foundation charter. An earlier bequest of the same nature occurs in 1456, when Alexander Sutherland of Dunbeath granted a capital sum for the repairs of St Gilbert's Church (*Origines Parochiales Scotiae*, vol. ii, part ii, p. 607). In a deed of Bishop Robert Stewart, dated 1557, repairs latterly done to the cathedral are mentioned (*Ibid.*, p. 610). The cumulative evidence certainly suggests that building was in progress in the fifteenth and sixteenth centuries.

and yellow-wash which have been applied to all the internal walls, giving a jaundiced aspect to the inward views of the edifice. Yet even in its mutilated degradation Dornoch Cathedral is still a fine church, chiefly owing to the very beautiful proportions which the modernised building has inherited from its mediæval predecessor. The martial tower, with its battlement, bartisans, and broach spire, has a most effective and pleasing appearance. Despite its truncated condition there is dignity in the west window; and in the interior of the church, the grand massive piers, clustered shafts, and soaring, richly-moulded arches of the crossing form one of the noblest fragments of mediæval architecture extant in the north of Scotland.

I have to thank the Rev. Charles D. Bentinck, B.D., minister of the cathedral, for facilities of access to the building, for information on sundry points, and for causing the photograph at fig. 4 to be taken on my request. The photographs at figs. 2 and 3 were taken by the late Mr William G. Jamieson, to whose sister, Miss Elsie Jamieson, Aberdeen, I am indebted for permission to reproduce them. I have also to thank Mr William J. Adair Nelson, Aberdeen, for assistance in making the survey.

ADDITIONAL NOTE, APRIL 1924.

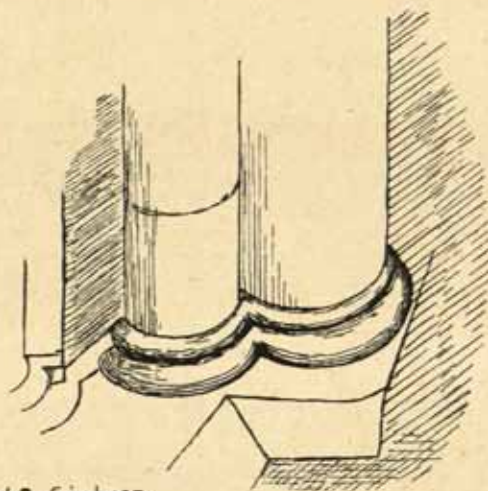
Since the foregoing account was drawn up, the Septcentenary Celebration Committee, on the Rev. Mr Bentinck's suggestion, has undertaken operations with a view to the exposure of so much of the ancient masonry as might have been spared by the "restorers" of 1835-7 beneath their lath and plaster surfacing. Interesting discoveries have thus been made, and I am indebted to Mr Bentinck for particulars embodied in the following note.

The work already completed comprises the laying bare of the piers and arches of the crossing and the lower part of the chancel walls. Beneath the plaster and ochre-wash the original masonry has everywhere been found in a satisfactory condition. The effect is distinctly good, and restores a measure of its ancient character to the church. The masonry of the piers, except the north-west one, was badly damaged about where the eighteenth-century lofts would have impinged upon them. This damaged stonework has now been carefully restored. Some of the stones in the south-west pier are weather-worn. The base of the north-east pier has been exposed, and is shown in the annexed illustration (fig. 5), from a drawing kindly furnished by Mr Bentinck. It will be seen that the mouldings are of good and early character, consisting of two rolled members separated by a "water-bearing" hollow. During the excavation of this base a dwarf-wall was discovered, running

out from the east and west sides of the base. It was probably the support of a former wooden floor, as the plinth on which the base rests, which is 5 feet square and built of dressed stone, has been cut into, apparently to make room for a sleeper-joist. This floor would have been above the original floor and under the present one. The piers are 27 feet in height, including the capitals, and the arch-mouldings, which were found intact beneath their ochreous incrustation, rise to a height of 47 feet above the original floor. A massive oaken beam was

found embedded in the masonry above the north transept arch. The piers are built of Dornoch sandstone,¹ and the capitals and arches are of sandstone from Embo. Numerous masons' marks are everywhere apparent.

The walls of the chancel are built of rubble like that of the Bishop's Palace, with dressed sandstone quoins. The part exposed extends to a height of from 6 to 8 feet all round the chancel. It has now been carefully pointed and finished off with a stone coping. In the south wall, at the modern door to the vestry, a built-up tomb-recess has been exposed. It measures 7 feet 6 inches



W. D. Simpson.

Fig. 5. Dornoch Cathedral: Base of North-east Pier of Crossing.

wide, and has been about 9 feet high above the present floor. The apex of the pointed arch had been cut away to make room for the windows above—whose modernity, in their present form, is thus established. Built into the exposed walls four memorials have been revealed. They are of late eighteenth- and early nineteenth-century date, and have been described in an article on Dornoch Cathedral published in the *Northern Times* of 20th March 1924, which contains an account of the above discoveries.

A stone tablet to St Gilbert, designed by Mr Alexander Carrick, A.R.S.A., Edinburgh, is to be placed in the choir.

¹ The quarry from which the stone is said to have been taken is still shown on the Links of Dornoch.

II.

FRAGMENTS OF A JET NECKLACE FOUND AT GREENHOWE,
PLUSCARDEN, MORAYSHIRE. BY H. B. MACKINTOSH, M.B.E.,
F.S.A. SCOT.

The District.—The neighbourhood of Greenhowe is that of one of the raised beaches so conspicuous around the Croy district of the valley of St Andrew, now known as the Glen of Pluscarden, but at one time as the "Kail" Glen, after the Order of the Val des Choux monks who founded here the Priory of Pluscarden in 1230.

The valley lies sheltered, having the Heldon Hill on its north, and the Buinach and Edinvale Hills on its south.

Ages earlier than the coming of the monks this corner of the glen had been inhabited, and evidences of this early civilisation turn up from time to time, especially upon this, the north slope of the Buinach Hill. At Tom Ruadh on this slope Survey Maps note that in 1868, two bronze spear-heads, an axe, and six rings were found. In whose possession these things are I fail to trace.

The whole of this moorland hillside is dotted with cairns, which are of considerable archaeological interest.

From the Charters of the Priory we learn that about 1230-3 this district formed part of the old Forest of Hochtertyr, the Bishop of Moray at that period surrendering to the Priory the tithes of iron and all iron in minerals found in the said forest. Perhaps the most abundant evidences of the monks' operations in iron are to be found near the Midland Burn, which rises in the hill above Incharnock, a little to the east of Greenhowe. Some specimens of iron slag found hereabouts are in Elgin Museum, as also of glass slag, etc., found at Croy in 1858, one of the supposed sites of the monks "Glazen Kilns."

The Prehistoric Grave.—Most of the farm land of Greenhowe had been covered with whins, etc., and reclaimed some two generations ago. The present tenant, Mr William Chisholm, in the tilling of the ground, especially on the plateau west-north-west of his home, had been troubled with the remains of three cairns. Time and again as opportunity arose he removed stones which had interfered with agricultural operations. One such cairn has been completely removed, but the site is known. The surface stones of a second cairn have also been removed, and during the winter-time the site will be examined. On

7th May 1923, when removing stones from the third cairn, which had damaged his implements, a grave was discovered.

The cairn had been originally some 18 to 20 feet in diameter, and Mr Chisholm says he had carted some twenty loads of the stones to the roadside for metal, while some heavier boulders were hauled to a dip at the edge of the moor.

The grave was not in the centre of the cairn, but about 3 feet from the west side; its site being 146 feet east and 165 feet north of the roads on the plateau leading up to the farm. It lay east and west, and was lined with four large stone slabs. The stones on the east, south, and west sides were apparently in their original positions; that on the north side had caved in a little. As there was no covering slab and the grave was full of sand and soil, it is possible this caving in had resulted when the covering slab had been removed at some earlier period, to permit, no doubt, of the better cultivation of the land. The bottom of the grave was of pure sand, as is the whole plateau, the ground only having about 10 to 12 inches of top soil.

The south-east corner of the grave was interesting. The slabs at this corner failed to meet, and the corner in the inside was formed of three smaller stones which, on first inspection, were said to have had the appearance of having been cemented in, but of this, when I visited the grave a few days later, I found no traces, and my impression was that they had been wedged in very carefully.

The inside measurements were:—length, east-west, 3 feet 2 inches; breadth, 2 feet 3 inches; and depth, 2 feet 5 inches, or to the present surface level 3 feet 5 inches. The grave had most certainly been interfered with. Mr Chisholm, in digging out the stones, had no idea that this was a grave until his spade threw out a few fragments of bones and a jet bead. The bones, which are undoubtedly human, were a tiny handful and too fragmentary for identification. Greater care was thereafter taken, and some seventeen beads were found. On my first visit a week later the ground was too wet to be worked, but I found another bead. Mr Chisholm and his friends unearthed other six. The first dry day, a few days later, Mr W. E. Watson, O.B.E., Elgin, and I again visited the site, and with a fine riddle we closely examined every handful of soil in the immediate neighbourhood, but only found one other bead. In all, two triangular terminal plates and twenty-three beads were recovered, the plates being entirely devoid of ornamentation. Sixteen of the beads were barrel-shaped and seven cylindrical, varying from about $\frac{7}{8}$ inch to 1 inch in length. The triangular plates have each five perforations at the broad end, pierced obliquely from the end to the back, and one

similar perforation at the apex, but in one of them this part is broken and a hole has been drilled directly through the object. Both plates are about 2 inches in length and 1 inch broad across the base.

The beads and plates found are very similar to those found at Burgie and elsewhere in Moray.

The boulders and stones comprising the cairn were a mixed lot, which apparently had been gathered from the hillside. They included ice-borne granites from Stratherrick, Ben Wyvis, and other places.

III.

ACCOUNT OF THE EXCAVATIONS ON TRAPRAIN LAW DURING THE SUMMER OF 1923. BY JAMES E. CREE, F.S.A.Scot.

Excavations on the Law were recommenced this year on 11th June, and the ground marked off for examination formed an L-shaped area, and lay to the west of that opened last year. Practically three sections were explored: two measured 50 feet square, while the third was incomplete. These sections, for identification purposes, have been marked R, S, and T. To the north and west the ground sloped considerably downwards, and clearly did not present the same favourable conditions for inhabitation as the area excavated in previous years. This will be seen later from the descriptions of the levels. The top level (fig. 1), which, as has been explained heretofore, is referable to the last occupation, was found, as usual, at a depth of about 14 inches below the turf.

Commencing with section R, a large mass of rough stones was encountered at the south-east corner. This extended towards the north-west, and entered section S not far from the centre of the south line of the section. A number of other rough stones were laid bare, but these had no particular formation.

Several hearths were noted. One about the centre of the south line was of rectangular form, the open end being towards the south. It was paved throughout with sandstone. About 20 feet to the north-east of this lay a fragmentary hearth, entirely composed of water-worn stones; and 12 feet to the north-west another ruinous hearth was uncovered. This was also largely formed of water-worn stones. Some 15 feet to the north-east of the latter another rectangular hearth was discovered, orientated north and south and completely enclosed by kerbstones. One of these, lying on the west side of the hearth, showed distinct chisel marks, indicating that the stone had been partly dressed. Adjoining this lay an area of flat stones which appeared to have been a hearth, but the

kerbstones had been removed, possibly to enclose the one just described. Towards the east lay another rectangular hearth. This was paved with

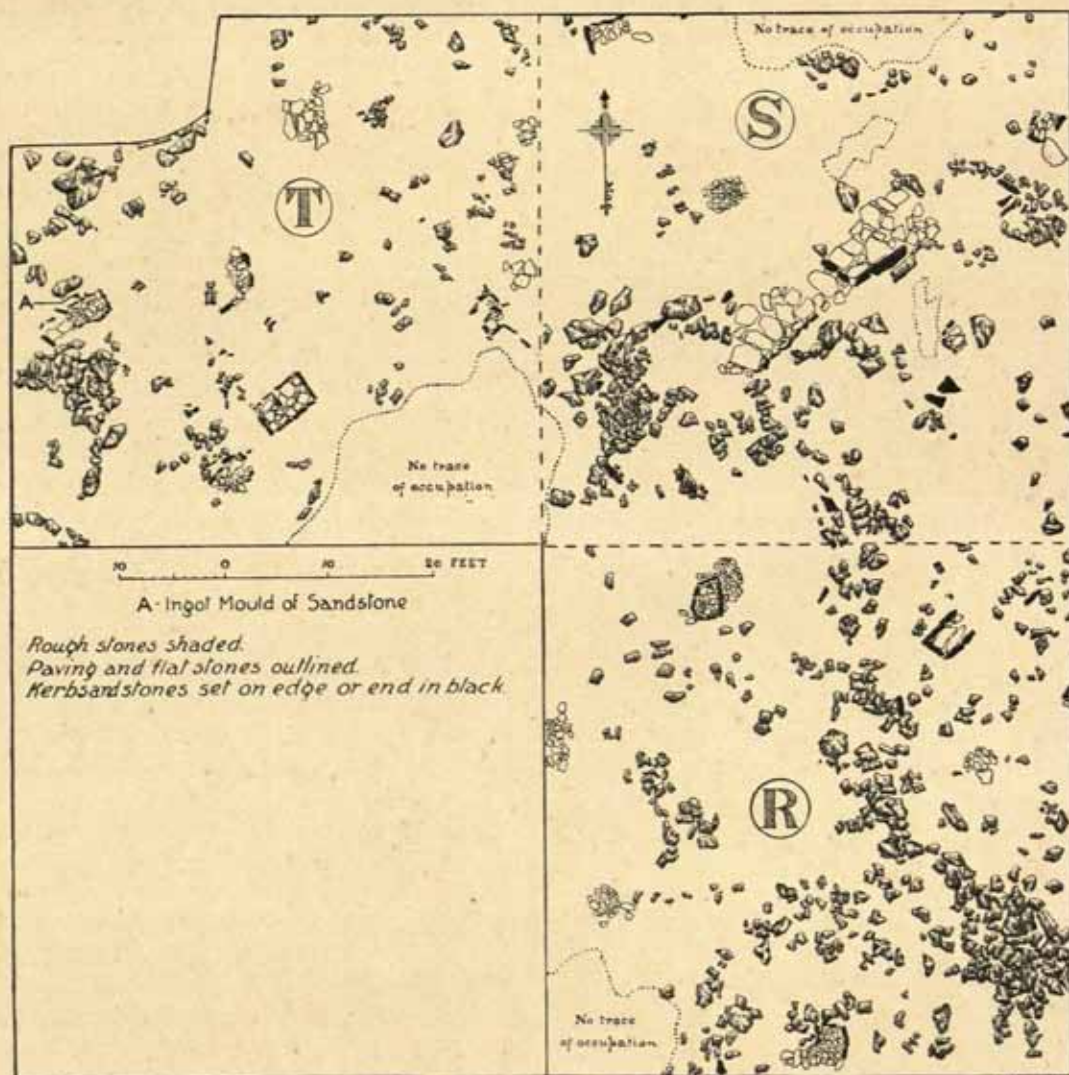


Fig. 1. Plan of Foundations on the first (highest) level.

the igneous rock of the hill, and its orientation was north-east and south-west, the open end being in the former direction. About 10 feet to the south-east a fragmentary hearth lay on the east section-line; and a

few feet to the south-west was another in a ruinous condition, but no kerbstones remained.

Proceeding into section S, a broad piece of paving, whose purpose was not apparent, will be noted occupying a position in the centre of the section. Its alignment is north-east and south-west, and a number of kerbstones border it on the south-east side, while two kerbstones cross it near the centre, and protrude above it about 6 inches. To the south-west of this a number of rough stones were found, placed so as to form a revetment, and soil and rubble had been filled in on the east side in order to level up the ground. Three ruinous hearths will be noted on plan, and each of these had several kerbstones still in position. One other hearth, lying about 10 feet to the north-west of the paving already described, was formed entirely of water-worn stones. The kerbing was also of the same material, and was only slightly raised above the floor of the hearth.

Entering section T, which adjoins S on the west, three paved areas and several hearths will be noted. Two of the latter are somewhat ruinous. One hearth, which is situated near the east line of the section and about 20 feet from the south-east corner, is apparently of the peculiar form noted in previous years, having the line of kerbstones extending outwards for several feet, on the left-hand side as one faces the back. In this instance the hearth, which apparently has been remodelled, is of small dimensions, and does not seem to have been so carefully constructed as usual. It is the first hearth of this form found on the top level, and merely shows a persistence of the fourth-century type, which heretofore has been only found on the second level. The rectangular hearth near the west section-line had one kerbstone on the north-west side, which had been a mould for casting an ingot, and it would thus appear that it was no longer of use for its original purpose. This stone will be described later. Towards the south-west of the section were a considerable number of large rough stones, and, as in section S, these had been placed so as to form a revetment, the ground to the east being levelled up by filling in with soil and rubble.

After removing the stones and soil from the first level, we came, at a depth of about 6 inches, to the second level (fig. 2). Close to the south section-line two parallel lines of stones were found orientated north and south, and forming one of the curious gutter-like structures noted in 1915. It is of interest to record that of the three similar structures found previously, one on the second level and another on the third level had the same orientation, while the remaining one on the third level was orientated north-east and south-west.¹

¹ Similar structures were found on section F, second and third levels (*Proceedings*, vol. I. fig. 10, pp. 77, 79, and fig. 13, pp. 80 *et seq.*).

One circular hearth was uncovered near the centre of the section, and two incomplete hearths which appear to have been rectangular. These

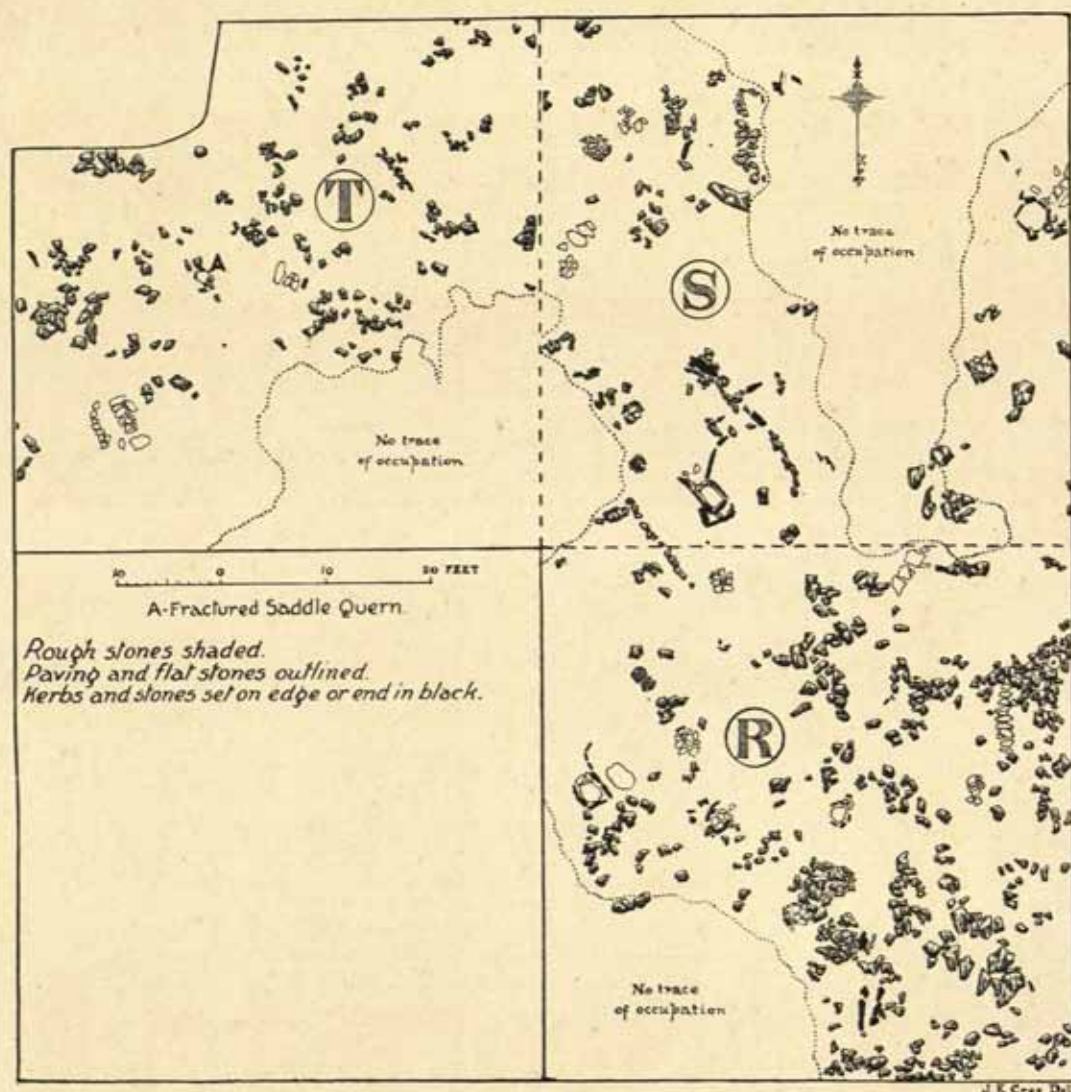


Fig. 2. Plan of Foundations on the second level.

lay about 8 feet to the south-west and west respectively. Still further towards the west, and close to the west section-line, a rectangular hearth was found. This was of the peculiar type, having a continuation of the

kerbstones on the left-hand side as one faces the back. A large paving-stone lay beside it. A few feet in a north-easterly direction a ruinous hearth was uncovered, having only one kerbstone in position; and about 12 feet to the north another ruinous hearth was noticed. Still another in a fragmentary state was brought to light not far from the east section-line. About 3 feet from this a line of paving was laid bare, and this terminated in a number of rough stones which were placed without any definite formation. Lying among these rough stones, the upper stone of a rotary quern will be seen on plan. Another small piece of paving may be observed close to the north line of the section.

An alignment of rough stones, measuring 10 feet 6 inches in length and commencing close to a ruinous hearth, will be noticed, continuing in a north-westerly direction into section S. Running parallel to this at a distance of about 13 feet 6 inches, another line of rough stones was observed, measuring about 16 feet 6 inches in length and terminating in a large stone set on edge. Between these two lines of stones another rectangular hearth was found, having the extension of the kerbing on the left-hand side and orientated similarly to a hearth of this character in section R. In this case, however, it appeared that a remodelling had taken place, and a portion of what may have been the original hearth will be observed at the back. About 3 feet from the north-west side of this structure stood a small pillar formed of rough stones set in clay, and a similar distance to the north of this was a small hearth of indefinite form. To the north of the latter some paving-stones lay close to the west section-line, and a few feet to the north of this was found a ruinous hearth, together with a few paving-stones. Another in a dilapidated condition will be noticed close to the dotted line on the north. A large area, in which no trace of occupation was found, will be observed within dotted lines extending from north to south through the whole section. To the east of this unoccupied area, one small, incomplete rectangular hearth was laid bare. To the north of the latter, and within a few feet of the east section-line, a peculiar, roughly circular enclosure was discovered. It was completely formed of stones set on edge. At the north-east side, one kerbstone lay about 6 inches below the rest, and what appeared to have been a paved pathway led up to this from a north-easterly direction. The interior of the structure was about 15 inches deep, but what purpose it served it is impossible to say. The floor was unpaved, and no object was found within the enclosure.

Proceeding now into section T, little structure is worthy of note. Indeed, a considerable portion towards the south-east, almost amounting to one-quarter of the area, showed no trace of occupation. Only one piece of paving may be mentioned, which was lying in the south-west

angle, and in the centre of the section was found one fragmentary hearth. A few feet to the west of the latter lay a fractured saddle quern, marked A on plan.

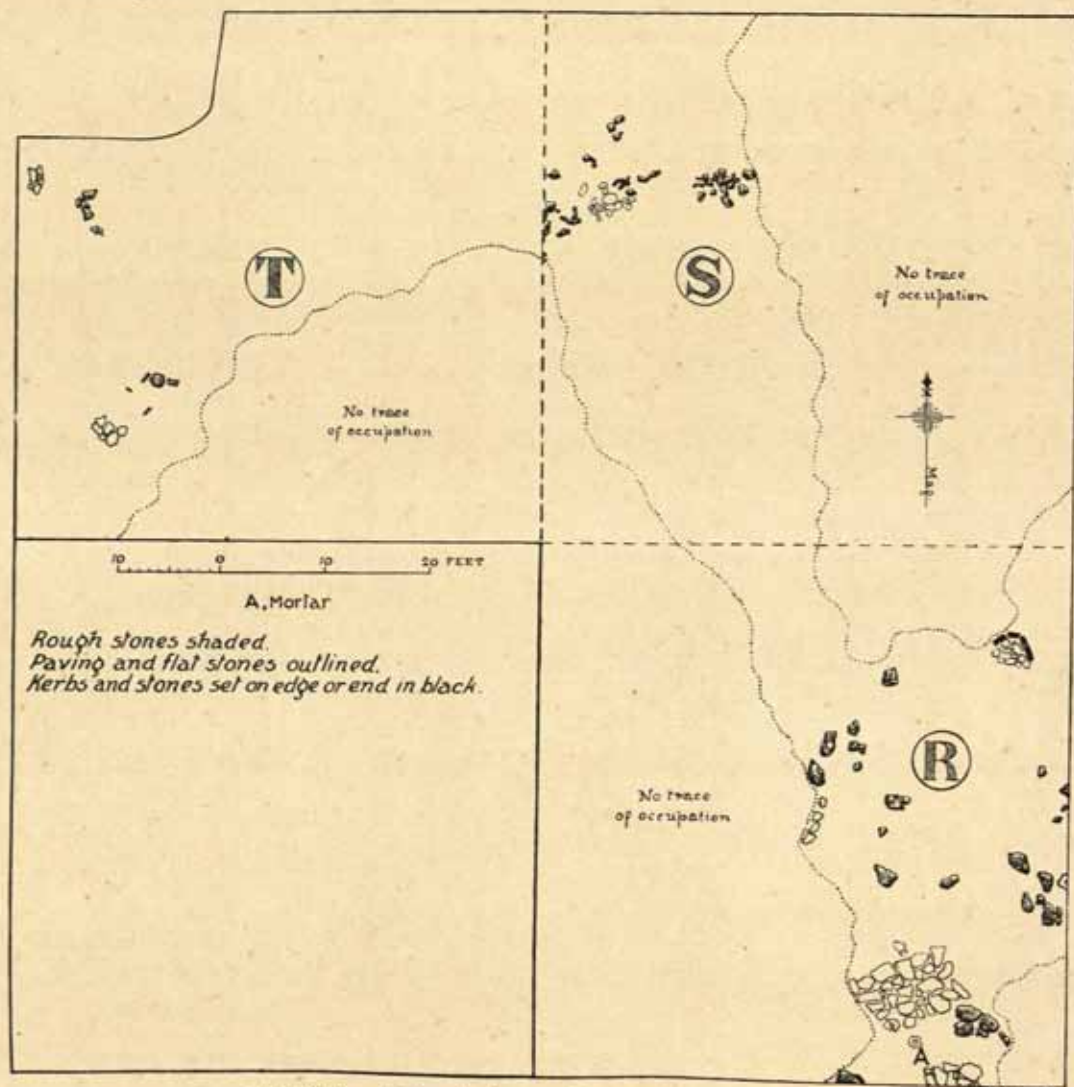


Fig. 3. Plan of Foundations on the fourth (lowest) level.

The stones and soil of the second level were, as usual, removed, and at a depth of 12 inches or more the next level was reached (fig. 3). Here it became apparent that the small amount of structure discovered, which

was overlying the natural rock of the hill, was in all probability referable to an early occupation, *i.e.* to what has been in previous years designated fourth level. The whole situation is somewhat difficult of solution, but it may be suggested that no recognisable third level of occupation existed on this portion of the hill, although there was ample depth of soil—about 2 feet—between the second and fourth levels. The relics found threw little light on the point, as objects easily assignable to both levels were recovered. It has already been mentioned in the introductory remarks that the ground, owing to its sloping character, did not seem to have been inhabited so continuously as the more level tracts which were excavated in previous years.

Only a small portion of section R seemed to have been under occupation. This will clearly be seen on plan. Two areas of paving will be noticed close to the south-east corner, and between these was found a mortar or knocking-stone (fig. 4), marked A on plan, measuring about 14 inches in length, 10 inches in breadth, and 9½ inches in thickness. The diameter of the cavity is 7½ inches and the depth 3 inches. The stone had



Fig. 4. Knocking-stone.

apparently been placed in the position in which it was found. Forming part of the larger area of paving was half a quern stone. On the east section-line another quern stone was found which had been fire fractured. It was a roughly circular upper stone, measuring about 12 inches in diameter, 2½ inches in thickness, and a hole at one side penetrated a distance of 1½ inch. Towards the north-east corner of the section was a ruinous hearth, whose form was somewhat horse-shoe shaped.

Section S provided us with still less structure, only one small paved area being uncovered towards the north-west side.

Section T was almost devoid of structure, only two small pieces of paving being brought to light.

We now come to a description of the relics, and, as has been customary in previous years, they will be taken conversely to the levels. It has already been explained that no third level was recognisable, and while, by analogy, many of the Romano-British relics could be safely given

either a third- or fourth-level attribution, others might possibly be referable to both horizons; and therefore, when describing the objects, those which might belong to the third level will be grouped along with those of the fourth level. Neolithic and Bronze Age relics will be taken first, of course.

RELICS FROM THE LOWEST LEVELS.

Relics which may safely be assigned to the former cultural epoch are as follows:—

Two leaf-shaped arrow-heads (fig. 5, Nos. 1 and 2), measuring nearly $\frac{7}{8}$ inch in length, are of brown flint. Another, which is calcined and imperfect (fig. 5, No. 3), measuring about $\frac{1}{8}$ inch in length, is of uncertain type. It may be of interest to note that since the excavations on Traprain commenced in 1914, fourteen arrow-heads have been recovered. Of these, seven are leaf-shaped, four lozenge-shaped, one barbed, one lop-sided, and the one above mentioned, whose form is uncertain. The leaf-shaped variety, therefore, appears to have been the type most in vogue; the lozenge-shaped seems to have been next in favour; while the barbed type is represented by one solitary example.

Several scrapers made of both flint and chert came from these levels. One of the former material, which came from section S (fig. 5, No. 4), is horse-shoe shaped, and of a dark brown colour. It shows evidence of considerable use. Another, which came from section R, is of a milky-brown colour, and is nicely worked along one edge. A flake of flint, measuring $1\frac{3}{8}$ inch in length, is calcined, and may have been a knife. It also has been finely worked along one edge. A flake of calcined flint, measuring $1\frac{5}{16}$ inch in length, is worked on one side into two hollows, the three prominences thereby created resembling the teeth of a saw. A flake of light brown flint, measuring about $1\frac{5}{16}$ inch in length, may have been a borer (fig. 5, No. 6). It is worked along one side, and terminates at one end in a nicely rounded point. An object (fig. 5, No. 7) which came from section R, measuring $1\frac{3}{8}$ inch in length, is of dark brown flint and triangular in cross-section. It has been roughly worked on one face and along two of its edges, and seems to have been much in use. One end also shows considerable battering. There are several flakes of flint and chert which are unworked and therefore require no further mention.

A stone axe (fig. 6, No. 1), measuring $4\frac{5}{16}$ inches in length and about $1\frac{3}{8}$ inch across the cutting edge, came from section T. A smaller one (fig. 6, No. 2), measuring $2\frac{5}{8}$ inches in length, came from section R. It is of a fine-grained material, and is interesting on account of having been used at some later period as a smoother or polisher. The cutting edge has been

nicely rounded, and one side has been flattened. The butt end of another (fig. 6, No. 3) from the same section, measuring $2\frac{5}{16}$ inches in length, is of

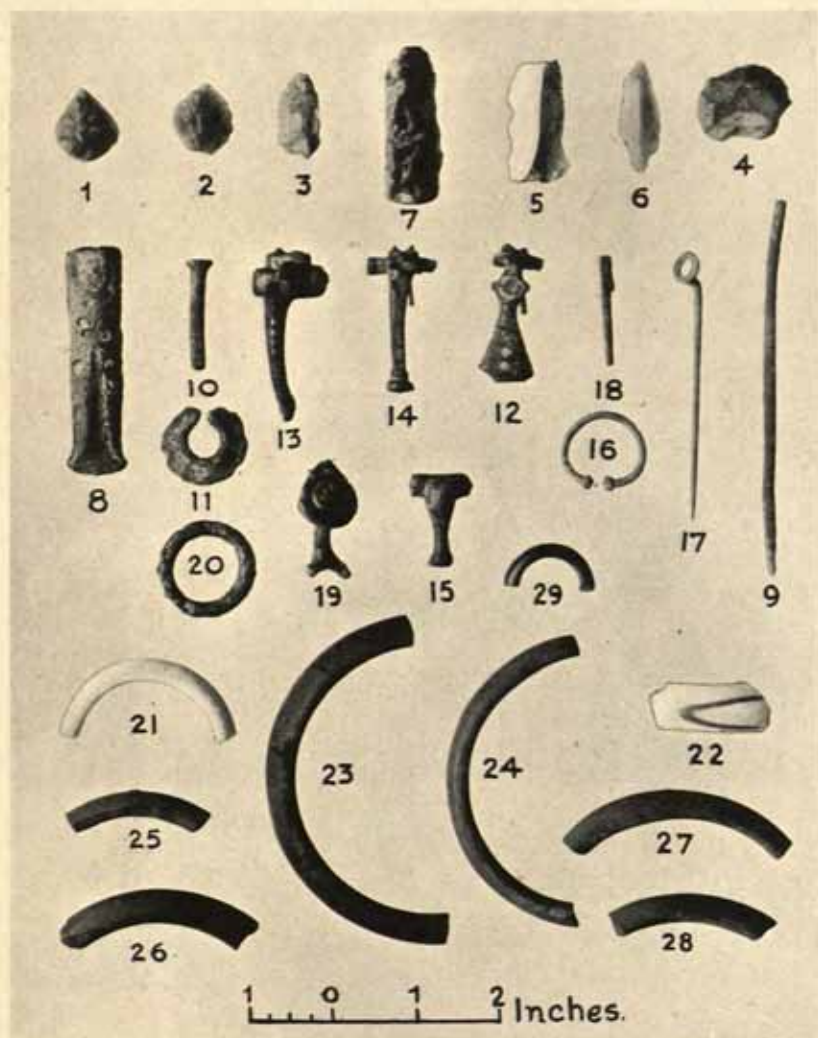


Fig. 5. Group of Relics (other than Iron) from the fourth (lowest) level.

rather coarser texture, and has been used for a similar purpose. The edge is smooth and flat, and measures $\frac{1}{2}$ inch in width. From here it is bevelled away on one side at an angle of about 48° , and on the other side at about 44° . A fragment of an axe is fire fractured and shows part of

the cutting edge, and of one side which is ground flat. It measures $3\frac{3}{4}$ inches in length.

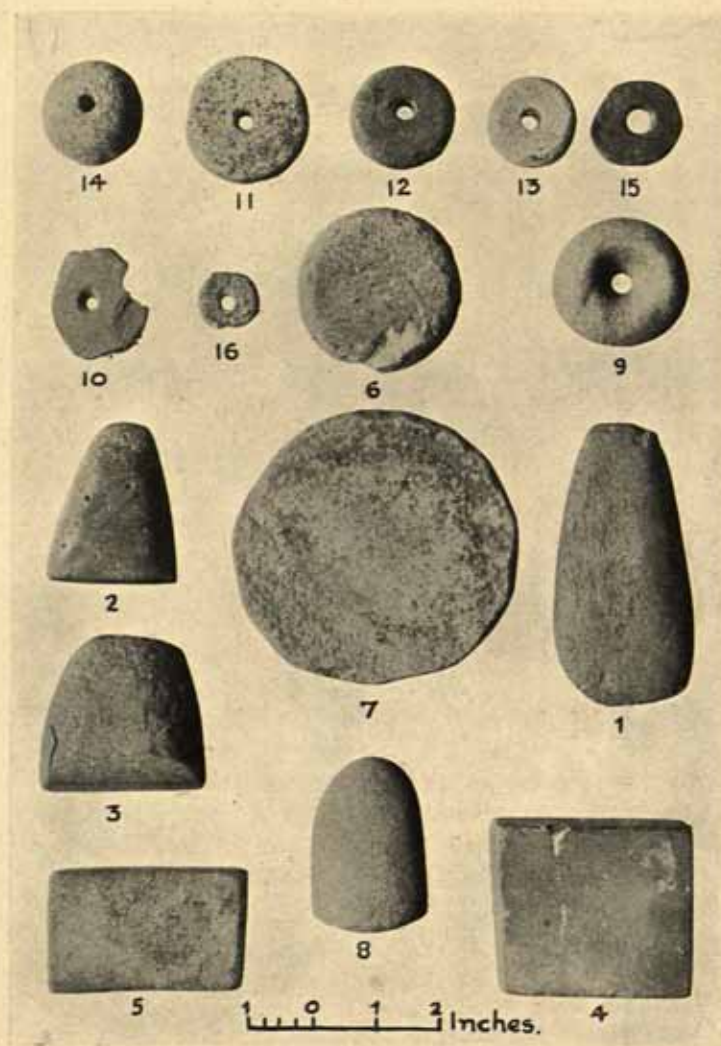


Fig. 6. Stone and Lead Objects from the fourth (lowest) level.

We now come to relics of the Bronze Age, comparatively few of which were recovered this year.

A bronze socketed gouge (fig. 5, No. 8, and fig. 7) is possibly the most interesting object brought to light. It measures nearly $2\frac{3}{4}$ inches in

length, and the socket, in which a portion of the wooden handle still remains, measures $\frac{11}{16}$ inch in external diameter. From the socket it tapers towards the cutting edge, which expands to nearly $\frac{11}{16}$ inch.¹ A pin (fig. 5, No. 9) measures $4\frac{1}{2}$ inches in length; a portion of another pin (No. 10), measuring $1\frac{5}{16}$ inch in length, has an oval head; another is fragmentary, and its original length cannot be ascertained. A penannular object of triangular section (fig. 5, No. 11, and fig. 8), whose purpose is unknown, may possibly belong to the Bronze Age. It measures about 1 inch in greatest diameter.²

Relics of the Romano-British period will now be described, and it will be remembered that these belong to the period about the end of the first, or commencement of the second, century A.D. Following the procedure of previous years, we shall commence with a description of the fibulæ.

Bronze:—Fibulæ.—Three bow-shaped fibulæ have to be recorded from these levels. The first (fig. 5, No. 12, and fig. 9, No. 1) is of a type of which no example has been found on Traprain heretofore. The cross-piece at the head is undecorated; from there towards the centre of the bow there is a gradual swelling, terminating in a circle, on either



Fig. 8. Penannular Bronze Object. (f.)

side of which is a small knob. The centre of this appears to have been occupied by an inlay of pale blue enamel; this has been encircled by enamel of a different colour—probably red—which in turn is enclosed by a ring of pale blue enamel. Almost adjoining the centre, but towards the head, there seems to have been a metal boss. The foot of the fibula is in the form of a truncated triangle, in the centre of which is a rectangular compartment inlaid with three lozenge-shaped devices of blue enamel, the triangular spaces between being filled with yellow.



Fig. 7. Bronze Gouge. (f.)

¹ One found in the river Tay is in the Museum (*Proceedings*, vol. v. p. 127). Another, from Ford, Loch Awe, is 3 inches long and has a collar round the neck (*Proceedings*, vol. xviii. pp. 207 and 208, fig. 3). One from Oldbury Camp which has a similar expanding edge is in the Devizes Museum, and is illustrated in *The Reliquary and Illustrated Archaeologist*, vol. xiv. p. 245.

² A similar object is illustrated in *Archéologie Celtique Second Age du Fer*, Déchelette, p. 924, fig. 390, No. 16.

The pin, which has been hinged, is broken.¹ Another fibula (fig. 5, No. 13, and fig. 9, No. 2) is of the hinged-pin type, the hinge being enclosed in the semi-cylindrical casing forming the cross-piece at the head. Attached by a wire which forms the axis of the hinge, and turned backwards, is a rectangular block of metal, to which the loop was joined; this is inlaid with yellow enamel, into which are introduced three spots of blue enamel. The cross-piece at the head is similarly treated. A cavity, which is pierced and has probably been occupied by a boss or setting, is placed on the bow immediately above the head; from here to the foot the bow is ornamented down the centre by a line of lozenges of blue enamel, on either side of which are triangular spaces filled with

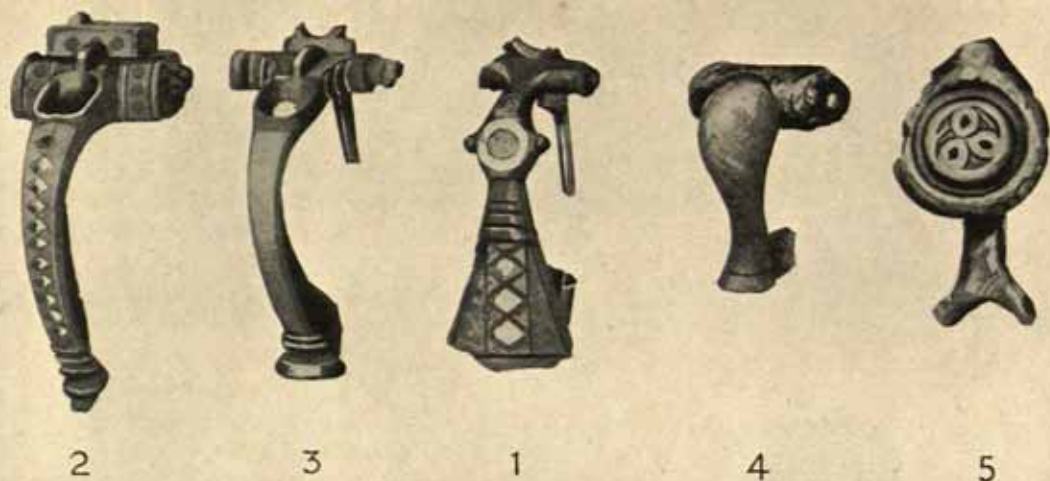


Fig. 9. Bronze Brooches and Dress-fastener. (1.)

yellow. At the foot there may have been a cavity filled with a boss or setting, but it is too imperfect to determine. The pin is wanting, and the catch-plate is also missing.² A third fibula (fig. 5, No. 14, and fig. 9, No. 3) is of the same type as the preceding, but is undecorated.³ A knee fibula (fig. 5, No. 15, and fig. 9, No. 4) is also undecorated and has the pin wanting.

¹ A brooch of this type was found at Newstead. *A Roman Frontier Post*, James Curle, vol. ii, pl. lxxxvi, fig. 24, p. 324.

² A brooch of this type was found in 1914; it came from the lowest level (*Proceedings*, vol. xlix, p. 166, fig. 23, No. 7). Another found in 1919 came from third level (*Ibid.*, vol. liv, p. 78, fig. 12, No. 1). Still another, which is very similar, was found in 1920, and came from second level (*Ibid.*, vol. lv, p. 184, fig. 21, No. 2).

³ One similar was found in 1920, and came from second level (*Proceedings*, vol. lv, p. 184, fig. 21, No. 1).

A brooch of penannular type (fig. 5, No. 16) has the usual fluted terminal knobs and is finely patinated. The pin is wanting.

Pins.—A pin (fig. 5, No. 17, and fig. 10) with a projecting oval ring head bevelled to the inside, measuring nearly $3\frac{1}{4}$ inches in length, is finely patinated. One with an annular head was found in 1914,¹ and two others with similar heads in 1915.² A fragment of another pin (fig. 5, No. 18), measuring $1\frac{5}{16}$ inch in length, has a zoomorphic head.

Dress-Fastener.—A dress-fastener (fig. 5, No. 19, and fig. 9, No. 5) of the boss and petal type is finely patinated, but most of the loop is wanting. The boss is ornamented by three oval rings in the form of a trefoil.³

Miscellaneous Relics of Bronze.—An armlet of rounded wire is of elliptical form, measuring about $2\frac{1}{8}$ inches by $1\frac{1}{8}$ inch in internal diameter. Unfortunately, it is in eight pieces, but apparently is complete. Another has been formed of two strands of finer wire, placed one above the other, and these have been held together by a small metal band. The armlet is very fragmentary and incomplete, but apparently is of similar dimensions to the preceding. Only one terminal was recovered, and it has been completed by turning the wire round into a hook; this doubtless has been the method by which the two ends of the armlet were joined. Both the above came from section R. They were found close together, and, owing to their small dimensions, one might believe that they may have been worn by a child. A ring (fig. 5, No. 20), measuring $1\frac{1}{2}$ inch in external diameter; a flat piece of bronze, measuring $1\frac{9}{16}$ inch in length and about $\frac{1}{4}$ inch in width, with a narrow moulding on each side; two fragmentary pieces of very thin bronze plate; three pieces of waste metal were also found.

Glass.—A segment of an armlet (fig. 5, No. 21) of opaque white glass is plano-convex in cross-section, and when complete would have measured only $1\frac{5}{8}$ inch in internal diameter. Another small segment of an opaque white armlet is ornamented by a hook-like device of blue enamel which is trailed across it (fig. 5, No. 22). There are two other small segments of opaque white and one fragment of opaque yellow; while a fourth piece is of translucent green. A few fragments of Roman glass need not be described.



Fig. 10. Bronze Pin. (f.)

¹ *Proceedings*, vol. xlix, p. 171, fig. 25, No. 3.

² *Ibid.*, vol. l, p. 102, fig. 23, Nos. 7 and 8.

³ *Ibid.*, vol. liv, p. 96, fig. 23, No. 3; is ornamented somewhat similarly.

Bead.—About half of a bead of red amber, measuring $\frac{1}{2}$ inch in external diameter and $\frac{11}{32}$ inch in thickness, is flattened on the opposite poles.

Jet or Lignite.—A large segment of an armlet, amounting to nearly one-half (fig. 5, No. 23), came from section T. It is triangular in cross-section, and when complete would have measured about $3\frac{5}{16}$ inches in internal diameter; about one-quarter of another is plano-convex in cross-section, and when complete would have measured about $3\frac{1}{4}$ inches in internal diameter; a segment, amounting to nearly one-half of a third armlet (fig. 5, No. 24), is also plano-convex in cross-section, and when complete would have measured about $2\frac{1}{8}$ inches in internal diameter; still another segment, which is markedly triangular in cross-section, when complete would have measured $2\frac{3}{4}$ inches in internal diameter; eleven other segments of armlets came from these levels, of which six are triangular and five plano-convex in cross-section. There are segments of two rings, the larger of which is of poor quality and is roughly fashioned. It has measured when complete only $\frac{1}{8}$ inch in internal diameter. The smaller (fig. 5, No. 29) has been nicely fashioned, is triangular in cross-section, and made of a good quality of jet. When complete it has measured about $\frac{1}{16}$ inch in internal diameter.

Stone.—From section R there is a block of fine-grained claystone, approximately square (fig. 6, No. 4), measuring about $2\frac{1}{16}$ inches by about 1 inch in thickness; it has been finely smoothed on both faces and sides, and probably has been used as a polisher. An oblong block of sandstone (No. 5), measuring 3 inches in length by $1\frac{1}{4}$ inch in width and $\frac{7}{8}$ inch in thickness, has also been smoothed on both faces and sides, and may have been used as a sharpening-stone; a whetstone, measuring $3\frac{1}{4}$ inches in length, has indications on it of transverse friction marks as though caused by a cord; a disc of coarse-grained sandstone (No. 6) measures $2\frac{7}{16}$ inches in diameter and about 1 inch in thickness; a roughly circular disc of hard, close-grained sandstone (No. 7), about $4\frac{7}{16}$ inches in diameter and nearly $\frac{5}{16}$ inch in thickness, is slightly hollowed on one side in the centre, where an attempt has apparently been made to polish it, the surface on the opposite side being rough and uneven; a disc, roughly circular, measuring about $3\frac{1}{2}$ inches in diameter and $\frac{7}{16}$ inch in thickness, may have been a pot lid; a pounder (No. 8), measuring $2\frac{9}{16}$ inches in length, is much abraded at one end; a ring (No. 9), measuring about 2 inches in external diameter and $\frac{7}{8}$ inch in thickness, is pierced by a hole about $\frac{5}{16}$ inch in diameter, nicely countersunk to the centre on both sides; an object of shale (No. 10), measuring about $1\frac{1}{4}$ inch in greatest diameter, which was, unfortunately, damaged by the spade, has been roughly circular in shape, and a hole which has been approximately in the centre pierces it obliquely—what purpose this object has

served it is impossible to say, but others made of stone are known similarly pierced and of a much larger size.

Whorls.—A large whorl of sandstone, measuring $1\frac{1}{8}$ inch in diameter and $\frac{7}{16}$ inch in thickness, is flat on both faces; another (No. 11) of yellow sandstone measures $1\frac{7}{8}$ inch in diameter; two others (Nos. 12 and 13), also flat on both faces and of the same material, measure respectively about $1\frac{3}{8}$ and $1\frac{3}{4}$ inch; a fifth (No. 14), also of sandstone, is a flattened spheroid measuring $1\frac{3}{8}$ inch in diameter; about half of another of burnt

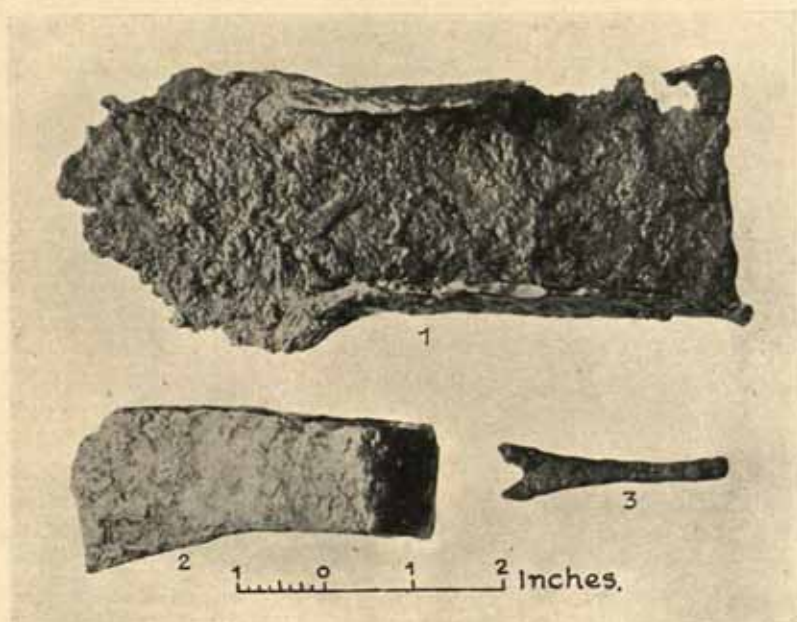


Fig. 11. Iron Objects (Nos. 1 and 2) from the fourth (lowest) level, No. 3 from the second level.

clay is of similar diameter to the last, and also has been a flattened spheroid; there is one of lignite of irregular form (No. 15) measuring about $1\frac{3}{8}$ inch in diameter, and one of lead (No. 16) measuring about $\frac{1}{16}$ inch in diameter; the last two come from section R.

Iron.—From section S came a ploughshare (fig. 11, No. 1) measuring $7\frac{5}{8}$ inches in length.¹ At the back it is 3 inches in breadth. From here the edges are upturned about 1 inch for a distance of nearly $4\frac{1}{2}$ inches, at which point the breadth of the share is constricted to $2\frac{9}{16}$ inches, the metal has been then increased in width, and from here it gradually

¹ One similar which was found at Cockburnspath is in the Museum. Déchelette, *Second Age du Fer*, p. 1378, mentions another from Idria. It is illustrated in fig. 610, No. 3.

diminishes towards the point. There was also an axe (fig. 11, No. 2) measuring $4\frac{1}{4}$ inches in length and about $1\frac{3}{4}$ inch across the cutting edge. At the opposite end the object has been increased in thickness, where it is pierced by a pear-shaped hole for the haft or handle.

Pottery.—Only a small amount of pottery of Roman manufacture came from the third and fourth levels. A vase (fig. 12) of red ware, which is undecorated, is only slightly broken at the rim. It was found in a cleft of rock, and may be considered as belonging to the fourth level. It is of graceful form, and measures $2\frac{3}{4}$ inches in height. The vessel at the



Fig. 12. Roman Vase.

rim, which is considerably everted, measures $1\frac{1}{2}$ inch in diameter. The body swells to $2\frac{1}{8}$ inches, from which point it contracts to the base, which only measures $1\frac{1}{8}$ inch in diameter. A number of shards of a large vessel of thickish red ware, several of which have been joined together, are ornamented by three parallel incised lines, which have been made with a pointed stick, and between which are two wavy lines fashioned in a similar manner. This band of decoration has been placed horizontally round the body of the vessel. It is worthy of note that shards of what is believed to be the same bowl or vase have been found in the excavations of previous years, having come from sections K, O^a, P, Q, R, and S, these sections together representing an area

of some 12,500 square feet. Some of the shards have been recovered from the third, second, and first levels of the above sections. There are only a few fragments of Samian ware from the third and fourth levels; a small number of fragments of cooking-pots have also been recovered, ornamented with the usual lattice-work decoration, and a mere handful of shards of other vessels of varying thicknesses and textures.

Native pottery is represented by a large number of pieces, including rims of many vessels. Some of these are considerably everted, many are straight, while one or two are turned inwards. One especially may be mentioned whose rim is $\frac{1}{2}$ inch in width and overhangs the interior of the vessel, protruding about $\frac{1}{4}$ inch from the wall; another vessel, of which several wall fragments have been joined together,

when complete has had an interior diameter of $8\frac{1}{2}$ inches at the rim, which is straight; two shards of a small bowl, that have been joined together, represent a portion from the rim to the base, which is rounded. When complete the vessel must have measured $3\frac{1}{2}$ inches in internal diameter at the rim, and it has had a depth of 2 inches. There are also four fragments of vessels (fig. 13) which have been

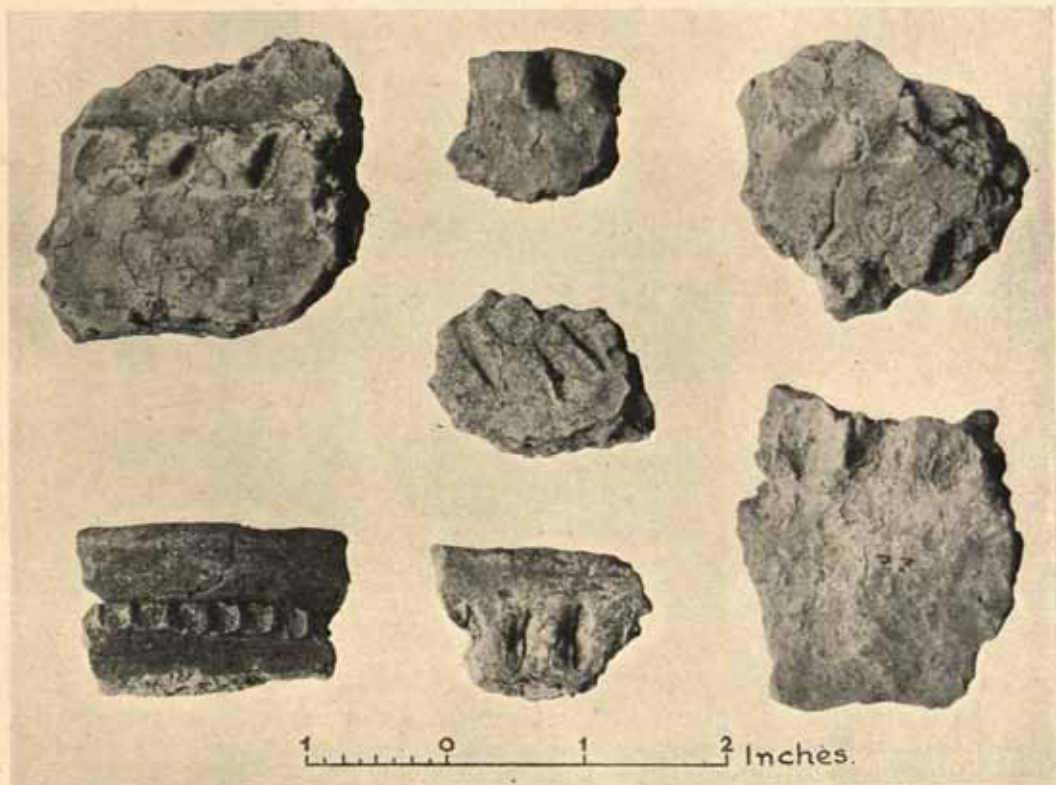


Fig. 13. Decorated Fragments of Native Pottery.

ornamented by a series of indentations made with the point of a finger and nail. Three of these came from section R. This ornamentation on one fragment which came from section T is placed diagonally on a raised moulding; another small fragment (fig. 13) which came from the former section has been ornamented by impressions of a pointed stick. Decorated native property has been sparse on the hill. Two fragments from the so-called sixth level (equivalent to our present fourth level) were found in 1921.¹ Two other fragments, which came

¹ *Proceedings*, vol. lvi. p. 219, fig. 19, Nos. 1 and 2.

respectively from the second and top levels, were also found the same year, and one shard was brought to light this year from the first level.¹ It will thus be seen that all but three decorated fragments have come from the lowest level. A small ball of clay measuring about $1\frac{3}{16}$ inch in diameter came from section R; a loom weight (fig. 14), which is in the form of a truncated cone, is incomplete. It measures $4\frac{1}{2}$ inches in height, and is pierced horizontally near the top by a hole measuring $\frac{3}{16}$ inch in diameter.² Two pieces of hardened clay show marks of wattle.



Fig. 14. Loom-weight of Clay.

Crucible.—A crucible of which there are several fragments from the rim to near the base has been of considerable dimensions. It is made of a fine paste, and seems to have been of the usual form, having a rounded base and triangular rim.

RELICS FROM THE SECOND LEVEL.

As might be supposed, relics belonging to the Neolithic Age are few, and possibly their occurrence on this horizon is more or less fortuitous. Only two scrapers were recovered, and it is hardly necessary to describe them.

¹ *Proceedings*, vol. lvi. p. 258, fig. 19, Nos. 3 and 4.

² A perforated ball of baked clay, believed to be a loom-weight which was found in 1914, is mentioned in *Proceedings*, vol. xlix. p. 200.

The only object of the Bronze Age found on this level was the point of a blade, possibly of a dagger, which came from section S. It measures about $\frac{3}{4}$ inch in length and $\frac{9}{16}$ inch in breadth.

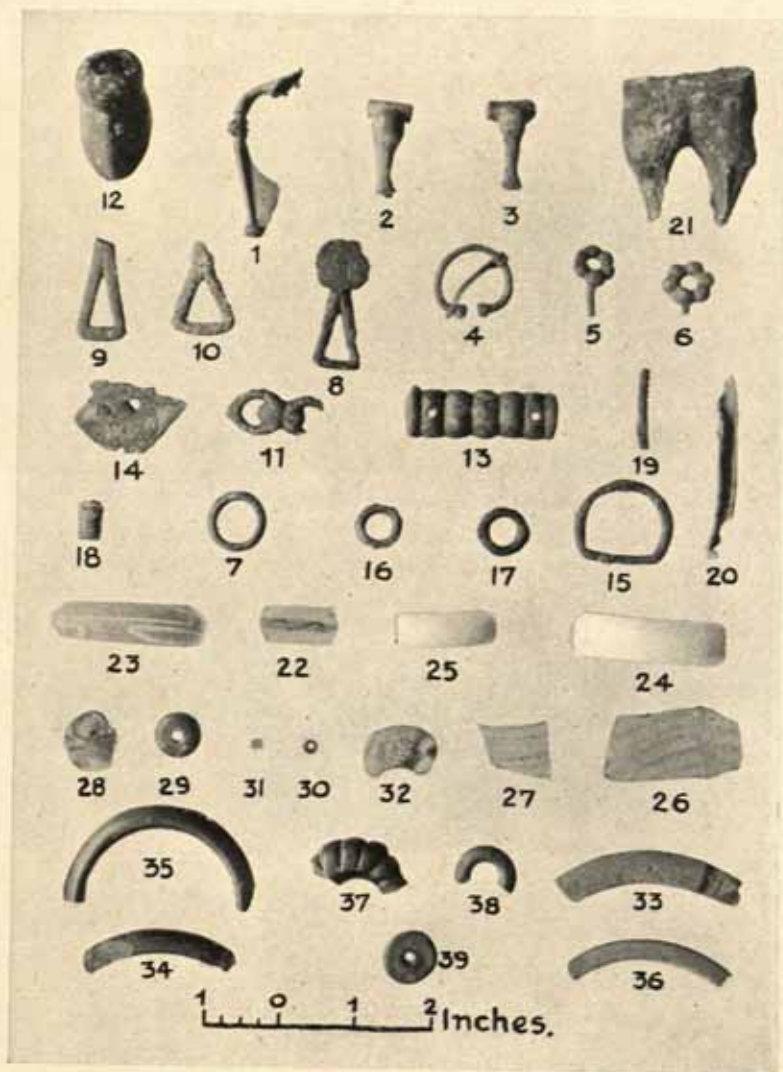


Fig. 15. Group of Relics (other than of Iron) from the second level.

Coming now to the Romano-British period, we were fortunate in finding quite a number of relics. These are as follows:—

Bronze:—*Fibulae*.—A bow-shaped fibula, which came from section S

(fig. 15, No. 1, and fig. 16, No. 1), has an elliptically expanding head; beneath this the pin, which is awanting, has been hinged. In the centre of the bow is a well-executed floriated knob, terminating both above and below in a notched moulding. At the foot are two circular mould-

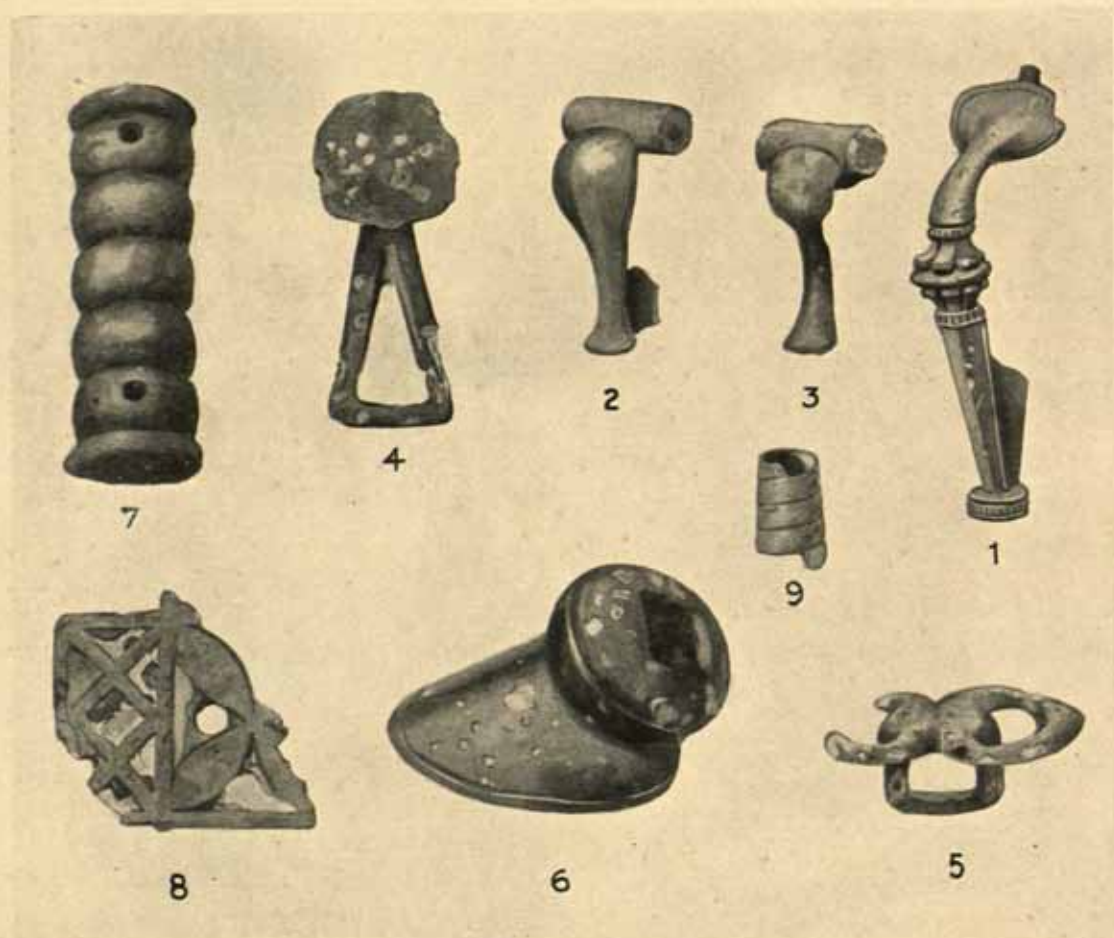


Fig. 16. Bronze Objects. (†.)

ings or discs, between which is another notched moulding. Two knee fibulae (fig. 15, Nos. 2 and 3, and fig. 16, Nos. 2 and 3) came from sections R and T respectively. Both have the pin awanting, and only the former has the catch-plate. A penannular brooch (fig. 15, No. 4), measuring about 1 inch in external diameter, has the usual fluted terminal knobs.

Pins.—Portions of two pins (fig. 15, Nos. 5 and 6), the heads of which

are annular and formed of six beads or balls set in a circle and flattened at the back, came from section S. Only small pieces of the stems of each remain. One of the heads has been coated with tin. There are also a portion of the stem of a pin of circular section measuring $1\frac{5}{8}$ inch in length; another, which is bent, measuring about $3\frac{5}{16}$ inches in length; and a third, measuring about $2\frac{1}{8}$ inches in length, square in cross-section and also bent at one end.

Since the excavations commenced in 1914 we have recovered six pins of this type, and another with the head of annular form and decorated so as to give the appearance of small beads. In the annexed table I have included pins of other descriptions in addition to the above, in order that the types, numbers, and relative levels from which they were obtained can be seen at a glance.

It is important to note that with regard to the pins with beaded heads, six have come from the second level, the remaining one having been found in 1921 on what was called the fifth level. None has come from either the first or third levels, and it would seem that possibly the solitary example from the fifth level was fortuitous. It is not improbable that such an object may have fallen down unnoticed from the bank of an unexplored section. But without unduly straining the point, it would appear from the evidence that the type under discussion belongs most probably to the fourth century. We may next mention pins of the so-called "hand" type, as beads again enter into the decorative design. It is supposed that they were intended to represent the fingers of a closed hand. Only two of these pins have come to light, and again we see that both have come from the second level. The next type to be considered is pins with plain ring heads. Of these, we find only one has come from the first level, one from the second level, and three from the third level. We may now consider pins with zoomorphic or similarly shaped heads and examine the horizons from which they have come. Here we get a rather striking result, as shown on the table on p. 262. Covering the whole period of the excavations, as in the previous cases, we find four have come from the first level, only one from the second level, five from the third level, and, as in the case of the bead-headed pins, only one from the fourth level. Thus from the second level, where six bead-headed and two "hand" type pins have been found, we only have one of the straight head ornamented type. Taking all the facts together, they seem to imply and lend additional strength to the already mentioned suggestion, that in the fourth century the bead-headed pins had been in vogue and to a large extent had taken the place of the zoomorphic type, which appears to have been more prevalent both at an earlier and at a later period. Without doubt these bead-headed pins have been made on the hill, as a spoilt casting of one was found in 1921,

and, while no moulds of this particular type have been recovered, it appears incredible that a casting which was of no use should have been

<i>Proceedings.</i>		Levels.			
		4th.	3rd.	2nd.	1st.
<i>Pins with Annular Beaded Heads.</i>					
1920	vol. lv. p. 186, fig. 21, No. 7 . . . .	...	...	1	...
1921	vol. lvi. p. 221, fig. 20, No. 1 ¹	1	...	...	...
1921	vol. lvi. p. 236, fig. 29, No. 4 . . . .	...	...	1	...
1921	vol. lvi. p. 254, fig. 29, No. 7 ² . . . .	...	...	1	...
1922	vol. lvii. p. 208, fig. 20, No. 3 ³ . . . .	...	...	1	...
1923	. . . . .	...	...	2	...
		1	...	6-	...
<i>Pins of "Hand" Type.</i>					
1914	vol. xlix. p. 171, fig. 25, No. 2 . . . .	...	...	1	...
1919	vol. liv. p. 88, fig. 19, No. 4 . . . .	...	...	1	...
		...	...	2	...
<i>Pins with Ring Heads.</i>					
1914	vol. xlix. p. 171, fig. 25, No. 3 . . . .	...	...	1	...
1915	vol. l. p. 102, fig. 23, Nos. 7 and 8 . . . .	...	2	...	...
1919	vol. liv. p. 84, fig. 15, No. 7 (iron) . . . .	...	1	...	...
1923	. . . . .	...	...	...	1
		...	3	1	1
<i>Pins with Zoomorphic Heads.</i>					
1914	vol. xlix. p. 171, fig. 25, No. 1	1	...	...	...
1915	vol. l. p. 102, fig. 23, Nos. 6, 9A, and 9B . . . .	...	3	...	...
1919	vol. liv. p. 80, fig. 13 . . . .	...	1	...	...
1919	vol. liv. p. 88, fig. 19, No. 3 . . . .	...	...	1	...
1919	vol. liv. p. 94, fig. 23, Nos. 1 and 2 . . . .	...	...	...	2
1920	vol. lv. p. 176, fig. 15, No. 7 . . . .	...	1	...	...
1920	vol. lv. p. 194, fig. 25, No. 3 . . . .	...	...	...	1
1922	vol. lvii. p. 217, fig. 26, No. 1 . . . .	...	...	...	1
		1	5	1	4

¹ Fifth level.² Spoilt casting.³ Decorated so as to represent a series of small beads.

brought to Traprain, and we know from the moulds of other types of pins found that the making of such by the native workmen was being

carried on there. We now come to the question of the moulds recovered for the casting of pins, and from the few that have been brought to light we can glean little information of importance. I have already stated that no moulds have been recovered for the casting of bead-headed pins. When we come to moulds for the casting of "hand" type pins we find that one mould has come from third level¹ and one from first level;² it will be observed, however, that none has come from fourth level. Coming now to the annular headed pins, only one mould has been found, and that came from the third level,³ like the majority of the pins of this type.

Returning once more to the bead-headed pins, one of which (as already mentioned) has been coated with tin, it is probably not too much to suggest that the process of coating objects with tin was well known to the late Celtic metallurgists, and was also locally carried on. A pin of the "hand" type which was found in 1914 was coated with tin; this came from the second level. The process, no doubt, would be simple; the object to be coated would possibly be covered with some resinous substance, and it would thereafter be dipped into a vessel containing molten tin. It must not be overlooked that the melting-point of tin is about 450° F., and it is probable that even a higher temperature would be obtained to enable the object to be satisfactorily treated. This temperature must have been produced in an open hearth, as no evidence of a forced draught has been discovered so far.

Finger-Ring.—A finger-ring (fig. 15, No. 7) which came from section S, measuring $\frac{3}{4}$ inch in external diameter and $\frac{7}{16}$ inch in breadth, is plano-convex in cross-section.

Dress-Fasteners.—A dress-fastener (fig. 15, No. 8, and fig. 16, No. 4), the head of which appears to have been circular, was recovered from section T. It measures about $1\frac{11}{16}$ inch in total length, the loop is triangular, measuring $\frac{5}{8}$ inch at the base. The loops of two others (fig. 15, Nos. 9 and 10), which are also triangular, came from sections R and S respectively. Dealing with the dress-fasteners in a similar manner to that adopted in reference to the pins, the annexed table may be of interest.

It will be observed that the total number of dress-fasteners recovered in the seven years' excavations amounts to twenty-six; of these, eleven have square heads. The greatest number were found on the two lower levels, only one coming from each of the upper levels. Of the boss and petal type we have nine—three from the fourth level, five from the third level, and one from the second level. Of the remaining six, two have ring heads, and as these are from the second and the first levels,

¹ *Proceedings*, vol. liv. p. 80, fig. 14, No. 2.

² *Ibid.*, vol. liv. p. 96, fig. 24.

³ *Ibid.*, vol. l. p. 126, fig. 37, No. 4.

they may possibly be later. The other four have heads of various

<i>Proceedings.</i>		<i>Levels.</i>			
		4th.	3rd.	2nd.	1st.
<i>Dress-Fasteners with Square Heads.</i>					
1914	vol. xlix. p. 173, fig. 25, No. 5 (has been enamelled)	1	...	...	...
1914	vol. xlix. p. 173, fig. 25, No. 8	1	...	...	...
1915	vol. l. p. 104, fig. 23, No. 16	...	1	...	...
1919	vol. liv. p. 67, fig. 7, Nos. 16, 17, and 18	3	...	...	...
1919	vol. liv. p. 79, fig. 11, No. 6	...	1	...	...
1919	vol. liv. p. 95, fig. 22, No. 8	...	...	...	1
1920	vol. lv. p. 186, fig. 21, No. 11	...	...	1	...
1921	vol. lvi. p. 226, fig. 20, No. 6 ¹	1	...	...	...
1922	vol. lvii. p. 200, fig. 13, No. 10	...	1	...	...
		6	3	1	1
<i>Dress-Fasteners with Boss and Petal Heads.</i>					
1915	vol. l. p. 104, fig. 23, No. 14	1	...	...	...
1915	vol. l. p. 104, fig. 23, No. 15 (enamelled)	...	1	...	...
1919	vol. liv. p. 67, fig. 7, No. 19	1	...	...	...
1919	vol. liv. p. 67, fig. 11, Nos. 7 and 8	...	2	...	...
1920	vol. lv. p. 186, fig. 21, No. 12	...	...	1	...
1921	vol. lvi. p. 251, fig. 28, No. 7	...	1	...	...
1922	vol. lvii. p. 200, fig. 13, No. 8 (ornamented) ²	...	1	...	...
1923	...	? 1	...	...	...
		3	5	1	...
<i>Dress-Fasteners with Ring Heads.</i>					
1914	vol. xlix. p. 173, fig. 25, No. 9	...	...	...	1
1920	vol. lv. p. 186, fig. 21, No. 10	...	...	1	...
		...	...	1	1
<i>Dress-Fasteners with Heads of Various Designs.</i>					
1919	vol. liv. p. 95, fig. 22, Nos. 9 and 10	...	...	...	2
1922	vol. lvii. p. 200, fig. 13, No. 9	...	1	...	...
1922	vol. lvii. p. 210, fig. 20, No. 4	...	...	1	...
1923	...	...	...	1	...
		...	1	2	2

¹ From so-called fifth level.² Indefinite, from third or fourth level.

designs, and in the general review they may be ignored, although none has come from the fourth level. It would therefore seem that the

dress-fasteners with square heads were in common use during the earliest Romano-British period of occupation of the hill, *i.e.* from about the beginning of the second century, and they possibly were less in vogue as time went on. Of the boss and petal type, three were found on the fourth level, five came from the third level, and only one from the second level, none being recorded from the first level.

Harness Mounting.—A harness mounting or strap ornament (fig. 15, No. 11, and fig. 16, No. 5), which is imperfect, came from section T. It is of the boss and petal type, but the boss has become rudimentary and merely represents the ends of the loop which are joined to the base of each petal.¹ The loop at the back is square, and only measures about $\frac{1}{2}$ inch in length.

The following table may be of use, as harness mountings are somewhat analogous in form to dress-fasteners.

<i>Proceedings.</i>		Levels.			
		4th.	3rd.	2nd.	1st.
<i>Harness Mountings with Square Heads.</i>					
1915	vol. l. p. 112, fig. 28, No. 3 ¹	...	1	...	...
1919	vol. liv. p. 79, fig. 11, No. 11	...	1	...	...
1920	vol. lv. p. 171, fig. 12, No. 12 ²	1	...	...	...
		1	2	...	...
<i>Harness Mountings with Boss and Petal Heads.</i>					
1915	vol. l. p. 112, fig. 28, No. 2	...	1	...	...
1919	vol. liv. p. 67, fig. 7, Nos. 20 and 21	2	...	...	...
1919	vol. liv. p. 79, fig. 11, No. 9	...	1	...	...
		2	2	...	...
<i>Leaf-shaped Type with Single Boss.</i>					
1919	vol. liv. p. 67, fig. 7, No. 22 ³	1	...	...	...
1919	vol. liv. p. 79, fig. 11, No. 10	...	1	...	...
1920	vol. lv. p. 171, fig. 12, No. 11	1	...	...	...
		2	1	...	...
<i>Circular with Boss.</i>					
1919	vol. liv. p. 67	1	...	...	...

¹ Cruciform.

² Rectangular.

³ Possibly fourth level.

¹ *Proceedings*, vol. liv. p. 79. One of this type is from the third level; it is illustrated in fig. 11, No. 9. Two others which came from the fourth level are illustrated in same vol., fig. 7, Nos. 20 and 21. In all these examples it will be seen that the boss occupies the entire space in the centre of the petal. The head of a dress-fastener found in 1921 presents a close analogy (*Ibid.*, vol. lvi. p. 251, fig. 28, No. 7).

In reference to the above, it will be observed that a total of eleven has been found. All have come from the two lowest levels, and of the various types recovered no deduction can be drawn as to one being more in vogue than the other.

Miscellaneous Relics of Bronze.—An interesting relic in the shape of a horse's hoof and pastern joint (fig. 15, No. 12, and fig. 16, No. 6) came from section T. It measures as follows: extreme length at the base of the hoof $1\frac{5}{16}$ inch, in greatest breadth $\frac{1}{2}$ inch, and in height to the top of the pastern joint $1\frac{1}{2}$ inch. An incised line surrounding the hoof close to the base from heel to heel may have been intended to represent a shoe. The object possibly has been one of the feet of a vessel or stand, and is pierced by a square hole measuring $\frac{3}{8}$ inch. A corrugated mounting (fig. 15, No. 13, and fig. 16, No. 7), similar to one found in 1920,¹ measures nearly 2 inches in length and about $\frac{5}{8}$ inch in breadth. It is semi-cylindrical in cross-section, closed at both ends, and is pierced by a hole on the upper surface close to either end. A richly enamelled fragment of what appears to have been an oblong ornament (fig. 15, No. 14, and fig. 16, No. 8) came from section R. It seems to have been divided into three panels, and it is fractured diagonally across what may have been the centre one, the decoration of which is composed of a leaf-shaped saltire. One space of the saltire is filled with blue enamel, while the adjoining space, which is pierced by a hole, has probably been left undecorated. The end panel is decorated by a lozenge-shaped design in the centre, filled with blue enamel, and at either end are triangular compartments which have been filled with a similar colour. The two triangular compartments on either side of the central lozenge have been filled with enamel of a different colour, possibly red. On the back of the object is a small raised moulding which crosses it transversely, beneath the dividing line of the centre and adjoining panels. A D-shaped buckle, the tongue of which is wanting (fig. 15, No. 15), is round in cross-section and measures $1\frac{1}{16}$ inch along the chord. A ring, which is incomplete, measures $\frac{1}{16}$ inch in diameter. Two others (fig. 15, Nos. 16 and 17) measure $\frac{3}{8}$ inch in diameter respectively. A fourth ring, measuring $\frac{3}{4}$ inch in diameter, is incomplete, and is made of a fine wire. A segment of a ring, measuring $\frac{9}{16}$ inch in width, is bevelled at both sides from the inside towards the outside. The centre is formed of a half-round moulding, and at each end it is irregularly notched. A coiled spring (fig. 15, No. 18, and fig. 16, No. 9) made of flattened wire is plano-convex in cross-section, measuring $\frac{1}{2}$ inch in length and $\frac{5}{16}$ inch in breadth. A wire (fig. 15, No. 19), measuring $1\frac{1}{16}$ inch in length, has a

¹ *Proceedings*, vol. lv, p. 194, fig. 25, No. 4. A mould for a similar object was found in 1919 (*Ibid.*, vol. liv, p. 80, fig. 14, No. 1).

series of corrugations measuring $\frac{1}{2}$ inch at one end and $\frac{5}{16}$ inch at the opposite end, the space between being left plain. There are a piece of metal, plano-convex in cross-section, measuring $\frac{7}{8}$ inch in length and $\frac{5}{16}$ inch in breadth, and a plate of thin metal, measuring $1\frac{1}{2}$ inch in length and $\frac{7}{16}$ inch in breadth, which seems to have been pierced by a hole at one end. A segment of an armlet or ring is made of a strong wire measuring $\frac{5}{16}$ inch in cross-section, and when complete would have measured $3\frac{3}{4}$ inch in internal diameter. Another small segment, of similar thickness, measuring about 1 inch in length, may have been a portion of that previously mentioned. A small segment, measuring about $1\frac{1}{4}$ inch along the mesial line, has been corrugated. Other objects found consist of two pieces of semi-tubular binding (fig. 15, No. 20), probably used for the protection of sheaths or scabbards; a piece of thin metal several times folded over; one or two small fragments which it is unnecessary to describe; a large piece of waste metal suggestive of the remelting of some objects—a flattened plate or tongue emerging from it as though some article had been imperfectly melted; two other small fragments; a segment of a circle $\frac{7}{16}$ inch in diameter at one end and tapering to a blunt point at the other; a large piece of metal (fig. 15, No. 21) from the twin gates of a mould, irregularly oval at the top, which measures $1\frac{1}{16}$ inch in length, about $1\frac{1}{16}$ inch in breadth, and $1\frac{7}{8}$ inch from the top to the end of the prongs, its weight being 6 ounces. It is evident that the mould from which the last relic came has been one for the casting of some object of considerable dimensions, and although it came from the second level, it may possibly be referable to the Bronze Age.

Glass.—A small segment of a glass armlet (fig. 15, No. 22), only about 1 inch in length, is of a pale green translucent material. It is plano-convex in cross-section and is ornamented along the mesial ridge by an applied cord pattern. This is composed of strands of red, white, and blue; the blue strand being widest, the red next, and the white the narrowest.¹ The segment came from section T, and is the first example of this decoration found on Traprain. A fragment treated in a similar manner but composed of strands of dark blue and white enamel was found in 1922;² a segment of an armlet of pea-green translucent glass (fig. 15, No. 23) is plano-convex in cross-section, and when complete would have measured about $2\frac{1}{4}$ inches in internal diameter. It is decorated with hook-like figures of opaque white enamel, placed alternately on each side of the mesial line. A third segment (fig. 15,

¹ A small segment of an armlet similarly decorated was found at Chesterhall, Bowden, St Boswells, and is in the Museum.

² *Proceedings*, vol. lvii, p. 202, fig. 16.

No. 24) is of opaque white, plano-convex in cross-section, and is of similar internal diameter to the preceding. There are other two small segments (fig. 15, No. 25) of opaque white armlets, both of which are plano-convex in cross-section. The smaller of the two seems to have been made of a finer paste and has a higher glaze. Another small fragment which is also plano-convex in cross-section is of pale yellow opaque glass. In addition to the foregoing there are four small fragments of green translucent glass armlets, three of which show traces of a white enamel decoration. A fragment of very pale green glass, measuring about $\frac{1}{16}$ inch in thickness, has been ornamented by

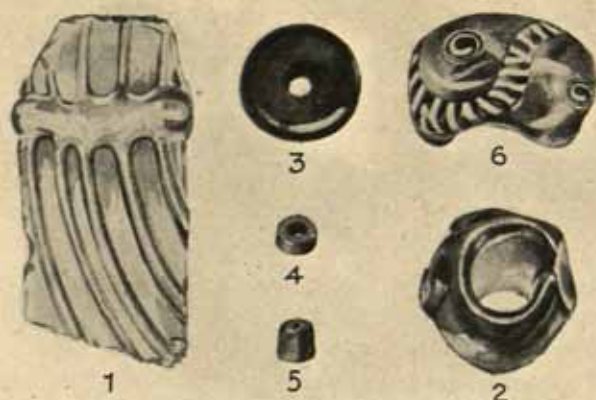


Fig. 17. Glass Objects. (4.)

an elliptical figure which has been wheel-engraved on its outer surface. Two other fragments, one of an olive-green colour and the other of white glass, also have on them traces of wheel-engraving. A rectangular fragment (fig. 15, No. 26, and fig. 17, No. 1) of what has been a large vessel, of a yellow-green colour, has been decorated by a raised band placed vertically on its outer surface, from which curvilinear raised mouldings extend in either direction. Another and smaller fragment (fig. 15, No. 27), of the same colour but of slightly thinner material, has a series of raised mouldings on its outer surface, which also have been placed horizontally. A portion of the neck of a bottle came from section T. It is of thick, dark blue-green glass and is considerably everted. When complete it would have measured 2 inches in outer diameter. A number of other fragments of vessels vary in thickness from about $\frac{1}{32}$ inch to nearly $\frac{5}{16}$ inch (the latter being the base of a vessel),

and in colour from olive-green to blue-green, while some pieces are of clear white glass; there is a small roughly triangular fragment of Roman window glass, one edge of which is rounded. It is about $\frac{5}{32}$ inch in thickness, and as usual is of a greenish-blue colour; a rather remarkable glass bead (fig. 15, No. 28, and fig. 17, No. 2), of a form unknown to Scottish archæology, came from section S. It seems to have been formed of a band of green translucent glass, and is of cylindrical shape. At the side where the two ends have been joined there is an elliptical depression, the edges of which have been ground down, and at right angles to this is a raised surface which is hollowed in the centre. The bead measures $\frac{9}{16}$ inch in height, and is pierced by a hole measuring $\frac{11}{32}$ inch in diameter; another bead (fig. 15, No. 29, and fig. 17, No. 3) is of a dark blue material. It is discoidal in form and measures $\frac{19}{32}$ inch in diameter; a third bead (fig. 15, No. 30, and fig. 17, No. 4) is discoidal in form, made of opaque green paste, and measures $\frac{3}{16}$ inch in external diameter; still another bead (fig. 15, No. 31, and fig. 17, No. 5) is of rectangular form and is square in cross-section. It measures nearly $\frac{3}{16}$ inch in length and is of a bright blue colour; an object (fig. 15, No. 32, and fig. 17, No. 6) which may here be mentioned is a portion of a large bead which came from section T. When complete it has measured about $1\frac{1}{16}$ inch in external diameter, and has been pierced by a hole measuring $\frac{3}{8}$ inch in diameter. It is of green translucent material, and in the thickness of the glass is decorated with a wavy line of white and blue opaque enamel, in such a way as to suggest a fine ribbon. The upper side of the ribbon is white and the lower side pale blue. In the intervening spaces between the waves are spiral devices also of blue and white enamel. Where fractured, the ends have been ground down and polished to a fine surface, which would indicate that the object must have been considerably prized even after it was broken, and it might be suggested that it had been worn as a pendant.

Lead.—From section S came a roll of lead (fig. 18, No. 20) measuring about $1\frac{3}{8}$ inch in length. It is slightly flattened. This, together with two smaller rolls (fig. 18, Nos. 21 and 22) which came from the same section, and which are similar to rolls of the same metal found in previous years, may have been a weight. Unfortunately, however, owing to corrosion, it has not been possible approximately to determine the proportion the smaller objects bear to those of larger sizes.

Jet or Lignite.—Objects of jet or lignite from this level consist of five segments of armlets (fig. 15, Nos. 33 to 36) and several fragments of others. Of these, three are of a poor quality of lignite and are triangular in cross-section, while one is of a fine quality of jet and is also triangular in cross-section. The fifth is plano-convex. Heretofore it has been

noticed that the majority of segments of armlets of triangular cross-section have come from the lower levels (fourth and third), and that the upper levels (second and first) usually yield those of plano-convex

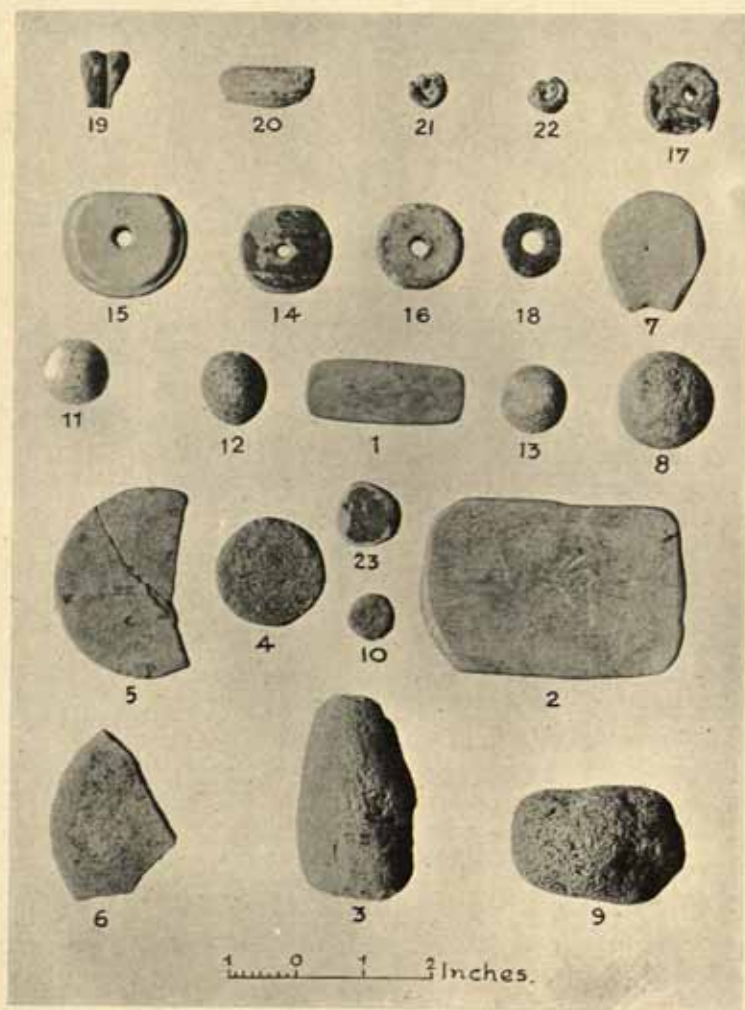


Fig. 18. Stone and Lead Objects from the second level.

cross-section. In this instance, however, we have four of the former and only one of the latter. The segment (No. 33), which when complete has had the largest internal diameter, has measured $3\frac{5}{8}$ inches; another (No. 34) measured $2\frac{1}{8}$ inches; while the third (No. 35), which is of a fine

quality of jet, has when complete only measured 2 inches in internal diameter. The segment which is plano-convex (No. 36) has measured 3 inches in internal diameter. The fragments which remain merit no description. An object of jet which may have been a pendant (fig. 15, No. 37), on one side is flat, and on the other has been decorated by a series of grooves which cross it transversely, forming lobate figures; a ring which is roughly circular (fig. 18, No. 18) measures about $\frac{1.5}{16}$ inch in external diameter. It was made of lignite and was found in two portions, one of which came from section R and the other from section T. Half of a ring of jet (fig. 15, No. 38), which is triangular in cross-section, measures about $\frac{3}{4}$ inch in external diameter; another segment is slightly larger and of thicker material; a wedge-shaped piece of lignite measuring $3\frac{5}{8}$ inches in length, shows striæ on its upper and lower surfaces; a discoidal bead (fig. 15, No. 39) which came from section R measures $\frac{1.1}{16}$ inch in external diameter.

Wood.—Under this heading may be mentioned a fragment of the shell of the hazel nut.

Stone.—An irregularly shaped piece of hard volcanic stone, which seems to have been fire fractured, has a hollow picked out on one face. Although this stone was found on the second level it is possible that it may belong to an earlier period. Whetstones are represented by four, which are complete, and a fragment of another. Only two of these need be further mentioned. One is about $4\frac{1}{2}$ inches in length and $1\frac{5}{16}$ inch in breadth at the base, which is flat, and is what might be termed hog-backed; the other, a small whetstone (fig. 18, No. 1), made of a thin piece of fine-grained stone, measures $2\frac{5}{16}$ inches in length, $\frac{7}{8}$ inch in breadth, and only $\frac{3}{16}$ inch in thickness, is nicely fashioned, has rounded corners, and shows striation on all its surfaces. A curious water-worn stone found in section S, which has been used as a polisher and is of hard siliceous fine-textured grit or greywacke, measures about $3\frac{1}{8}$ inches in length and $2\frac{1}{8}$ inches in breadth—slightly to one side of the centre is an elliptical hole measuring about $1\frac{1}{8}$ inch in length, and at one end of this hole and on both sides of the stone a channel has been cut towards one end; a rectangular piece of fine-grained claystone (fig. 18, No. 2), which appears to have been a polisher, is $3\frac{3}{8}$ inches in length and about $2\frac{9}{16}$ inches in breadth. It also has rounded corners and is bevelled at both ends to a fairly sharp edge; a portion of another polisher, which also may have been rectangular, is of a reddish material and shows striæ on both surfaces; an elliptical stone, measuring about $2\frac{1.5}{16}$ inches in length and $2\frac{1}{2}$ inches in breadth, is slightly hollowed on both faces; another elliptical stone is about $2\frac{3}{8}$ inches in length and shows striæ on one face; a pounder (fig. 18, No. 3) of coarse-grained sandstone, measuring about $2\frac{1.3}{16}$ inches

in length, swchos battering at both ends and came from section R; a hammer-stone of water-worn quartzite, measuring 4 inches in length, shows battering at both ends, and came from section T; a discoidal piece of coarse-grained sandstone (fig. 18, No. 4), measuring $1\frac{5}{16}$ inch in diameter, came from section R; about half a polished disc (fig. 18, No. 5) of red micaceous sandstone, measuring $2\frac{3}{4}$ inches in diameter and $\frac{1}{4}$ inch in thickness, came from the same section; a quadrant of another (fig. 18, No. 6), of the same material but of a yellow-brown colour, came from section S—it is $\frac{5}{16}$ inch in thickness and when complete would have measured about $3\frac{5}{16}$ inches in diameter. It will be remembered that last year, in vol. lvii. p. 213, I drew attention to the levels from which discs of this kind were recovered, and from the evidence then adduced I suggested that, as practically all of these objects had come from the second level, they might be considered as belonging to the fourth century. The occurrence of fragments of other two on this level still further strengthens the suggestion then made. A flat stone of elliptical form (fig. 18, No. 7) has had a wide groove cut in it at one end, and on both faces an attempt has been made to drill a hole through it. The hole, however, on one side has not corresponded to that on the other. There are one sling-stone (fig. 18, No. 8) and half of another, which came from sections R and T respectively; a piece of pumice-stone (fig. 18, No. 9), of a size convenient to hold in the hand, is flattened on one face, and came from section T; a roughly spherical piece of sandstone is only about $\frac{1\frac{3}{8}}$ inch in diameter and seems too small to have been a sling-stone; a disc of sandstone (fig. 18, No. 10) may have been a playing-man. Since the commencement of work in 1914 a total of eighty of these little playing-men or counters have been recovered. Only six have come from the fourth level, eighteen from the third level, forty-five from the second level, and eleven from the top level. These figures would seem to point to their probably being in greatest use during the first half of the fourth century.

Three small balls made of coprolite (fig. 18, Nos. 11 to 13) measure roughly $\frac{1\frac{5}{16}}$ inch in diameter and may have been used in some game. In the annexed table I have included all the objects of coprolite (twelve in number) which have been found since the excavations first commenced. It will be of interest to note that none has come from the fourth level, only two from the third level, eight from the second level, and two from the first level. It would thus appear that objects of this material were not in vogue on the hill before the third century A.D., and the numbers recovered from the second level would seem to indicate that artifacts of coprolite were in greatest use during the third century.

<i>Proceedings.</i>		<i>Levels.</i>			
		4th.	3rd.	2nd.	1st.
<i>Objects of Coprolite.</i>					
1914	vol. xlix. p. 201, large ball . . . . .	...	...	...	1
1919	vol. liv. p. 83, large ball . . . . .	...	1	...	...
1919	vol. liv. p. 90, bead and a ball . . . . .	...	...	2	...
1920	vol. lv. p. 200, fig. 24, No. 33, bead . . . . .	...	...	...	1
1920	not recorded. An elongated pear-shaped object . . . . .	...	...	1	...
1921	vol. lvi. pp. 252 and 256, fig. 36, Nos. 1 and 2, whipping-tops. . . . .	...	1	1	...
1922	vol. lvii. p. 214, fig. 19, No. 40, playing-man . . . . .	...	...	1	...
1923	small ball . . . . .	...	...	3	...
		...	2	8	2

Whorls.—There are four whorls and half of a fifth. One from section R (fig. 18, No. 14) is made from a piece of Samian ware. One, of a fine-grained claystone (fig. 18, No. 15) from section S, deserves more than passing notice, as owing to its fine texture it has been used subsequently as a smoother or polisher, for which purpose it must have been considered more suitable. It measures $1\frac{7}{8}$ inch in diameter and nearly $\frac{3}{8}$ inch in thickness. At $\frac{3}{16}$ inch from the periphery the whorl has been reduced in thickness on both sides to $\frac{3}{32}$ inch, and the edge has then been nicely rounded. On one side several wedge-shaped depressions have been cut. One whorl of lead (fig. 18, No. 16) came from the same section, and another (fig. 18, No. 17) from section T is much oxidised.

Iron.—A socketed spear-head (fig. 19, No. 1) which came from section R, measuring $4\frac{1}{8}$ inches in total length, with a blade which measures about 2 inches in length, is leaf-shaped. The socket, which is split, measures about $1\frac{3}{8}$ inch in exterior diameter. A large T-shaped key (fig. 19, No. 2) measuring $7\frac{3}{4}$ inches in length has a loop which is imperfect at one end, and one of the arms of the "T" is missing. It is curiously similar to one found at Newstead.¹ There are a ring measuring 2 inches in external diameter; a point of a knife or dagger measuring $1\frac{5}{8}$ inch in length; a clamp measuring $1\frac{5}{16}$ inch in length; a bar (fig. 19, No. 3) measuring $4\frac{1}{2}$ inches in length, square in cross-section, each side measuring $\frac{1}{4}$ inch; and a portion of a bolt with lozenge-shaped washer riveted on one end. An object (fig. 11, No. 3), measuring $2\frac{1}{2}$ inches in length and

¹ James Curle, *A Roman Frontier Post*, p. 306, Pl. lxxviii. fig. 3.

$\frac{1}{4}$ inch in breadth about the centre, swells towards one end, which is bifurcated. The point of a ferrule (fig. 17, No. 4), possibly for a spear-butt,

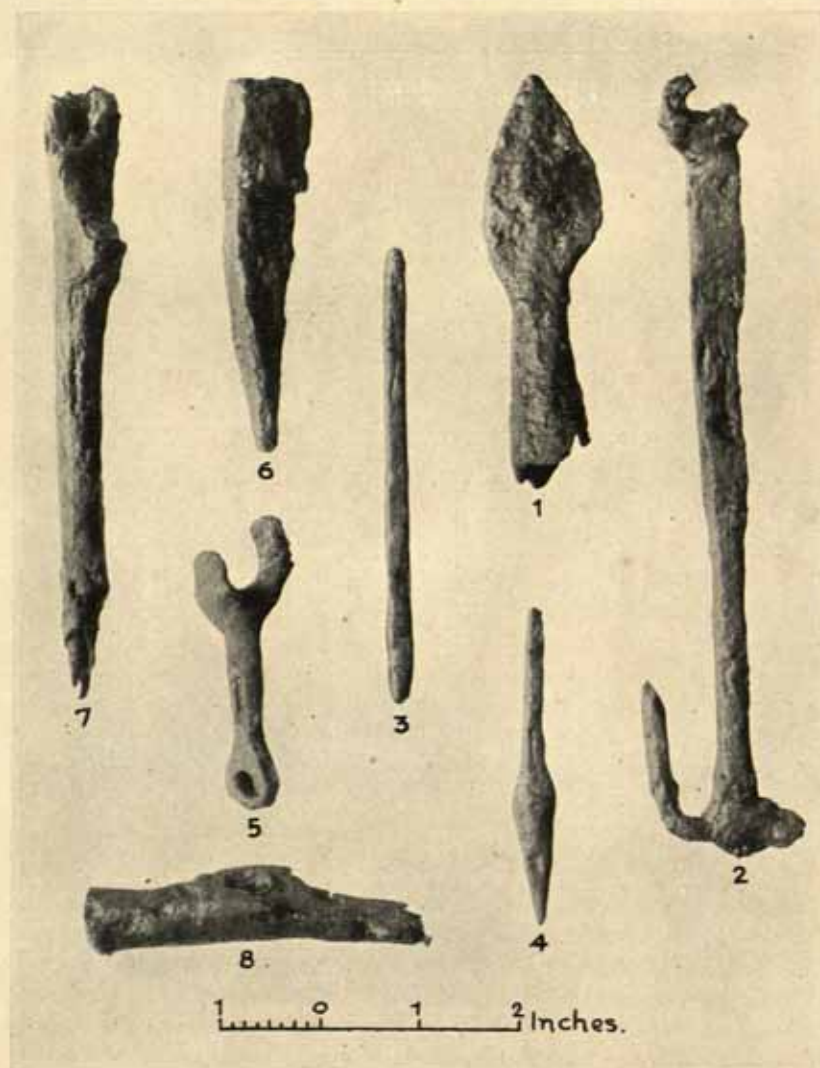


Fig. 19. Iron Objects from the first and second levels.

is $3\frac{1}{8}$ inches in greatest length, and is similar to one found in 1915.¹ An object which has the appearance of a blade is $3\frac{1}{2}$ inches in length and $\frac{1\frac{3}{8}}{16}$ inch in width. It is pierced by three holes, which are countersunk

¹ *Proceedings*, vol. I. p. 115, fig. 20. No. 5.

on one side and placed in line but slightly diagonally along the blade. The back of the blade is $\frac{5}{16}$ inch in thickness. A piece of hematite has been used as a polisher, the smooth surface measuring about $1\frac{5}{8}$ inch in length; a piece of iron slag is of nearly pure metal, and when analysed proved to contain about 90 per cent. of iron.

Moulds.—From section R came a fragment of a clay mould (fig. 18, No. 19), possibly for the casting of the shank of a pin; it measures about $\frac{7}{8}$ inch in length; two other small fragments were found. One mould cut in a block of red sandstone for the casting of a narrow bar or ingot measures $5\frac{1}{4}$ inches in length and came from section R. Another of sandstone, which is fragmentary, also came from the same section. The portion of the matrix which remains is semicircular, and it is possible that the mould when complete was similar to one found in 1914.¹

The annexed table is not without interest.

<i>Proceedings.</i>		Levels.			
		4th.	3rd.	2nd.	1st.
<i>Stone Moulds.</i>					
1914	vol. xlix. pp. 191-93, fig. 40 . . . . .	...	...	3	2
1915	vol. l. p. 127, fig. 39, No. 3 . . . . .	...	...	3	...
1920	vol. lv. p. 198 (two incomplete) . . . . .	...	...	...	2
1922	vol. lvii. p. 186 . . . . .	...	...	2	...
1923		...	...	2	1 ¹
		...	...	10	5

¹ This mould was found on first level, having been used as a kerbstone to a hearth, and therefore it probably belongs to second level.

It will be seen that although fifteen have been found, either complete or fragmentary, none has been recovered from the two lower levels, and there is therefore a distinct suggestion that the casting of objects in stone moulds only came into use on Traprain about the fourth century.

Pottery.—Roman pottery from this level is represented by a number of shards embracing various types of vessels. Portions of the base rims of several bowls or vases of Samian ware may be recorded. Other shards of the same material show portions of the walls and rims, and some fragments are decorated by the common egg and tassel moulding. A triangular fragment of a bowl has the feet of a figure within what

¹ *Proceedings*, vol. xlix. p. 194, fig. 41.

has been a large medallion. A portion of the rim and wall of a vessel has had a hole drilled through it immediately beneath the rim. The purpose of this was possibly to join two portions together where cracked; a small shard has the remains of an inscription in graffiti, seemingly V and N, scratched on its outer surface. We have five fragments of black Rhenish ware ornamented with a white engobe, one piece bearing two large circular spots and two vertical lines. On this and another fragment there are also roulette markings. The largest shard is a portion of the neck of a vase or bottle. There are a number of shards of what has been a large globular vessel ornamented by three bands of roulette markings, which encircled it below the neck, on which there is still a portion of a reeded handle. The clay of which this vessel is composed is of a creamy colour, and the outside is covered with a greenish slip; the base of a small vase of greyish-black ware measures about 1 inch in diameter; fragments of cooking-pots and other vessels need not be described.

Shards of native pottery from the second level were fairly numerous, but few seem to be of sufficient importance to merit description. Fragments of the rim of a very large vessel may be mentioned. Three portions of the rim of this bowl also came from sections R and S, third level, and have been described previously. When complete, this vessel has measured $14\frac{1}{2}$ inches in interior diameter. A portion of the wall of a large bowl-shaped vessel which is of a coarse character has a straight rim, and has measured $11\frac{1}{2}$ inches in interior diameter. Two shards of a small bowl, from rim to base, which came from section T, have been joined together. The rim is straight and thin, and when complete the vessel has measured about $4\frac{1}{2}$ inches in interior diameter and 2 inches in depth. A small rectangular shard from the same section has a broad rim turned inwards. A larger fragment of the same vessel came from the third level, and has already been mentioned; there are several shards of a vessel of hard texture which is vesicular and porous in appearance. Only one other fragment need be described, as it shows ornamentation, and is probably a portion of the same vessel a shard of which from the level below was described. The ornamentation, as will be remembered, consists of a raised moulding which has surrounded the vessel, and upon which finger point and nail impressions have been made. A small triangularly shaped piece of hardened clay having a rounded point has been one of the feet of a vessel. It measures $1\frac{1}{8}$ inch in length. An oblong piece of clay, pointed and faceted at both ends, has been a part of the base of some vessel. It is of fine texture, and apparently has been used as a polisher or smoother. On its surface are several arrises.

Crucibles.—About two-thirds of a crucible of the usual type, rounded at the base, and triangular at the rim, were found. It measures about $2\frac{1}{2}$ inches in interior diameter and 2 inches in height. Portions of another and much larger crucible were also recovered, but, unfortunately, owing to its fragmentary condition it is impossible to give dimensions.

RELICS FROM THE FIRST LEVEL.

Silver.—A small ring made of fine wire measures $\frac{3}{8}$ inch in diameter, and came from section S.

Bronze:—Fibulae.—A fine penannular fibula (fig. 20, No. 1, and fig. 21), measuring about $2\frac{5}{16}$ inches in diameter, came from section R. The brooch is made of a wire measuring $\frac{1}{8}$ inch in cross-section. The ends are flattened and squared, and are ornamented by a lozenge-shaped device of yellow enamel. On one side of the brooch, for a short distance, the wire is further ornamented by a series of fine incised lines which encircle it. These incised lines may have continued throughout the entire circumference, but owing to corrosion are not now visible. Brooches of this type, but having no enamel ornamentation, are well known,¹ the present example, however, by reason of the ends being enamelled, is new to Scottish archæology. A small penannular brooch (fig. 20, No. 2) has the usual fluted terminal knobs—the pin, unfortunately, is broken.

Pin.—A pin measuring about 2 inches in length is bent towards the point.

Miscellaneous Relics of Bronze.—A segment of an armlet is lozenge-shaped in cross-section, and when complete would have measured about $1\frac{1}{16}$ inch in diameter; a segment of another armlet, which is twisted probably by the action of fire, is ornamented on its outer surface by a series of corrugations, and measures about $1\frac{3}{8}$ inch in length; a segment of a ring is plano-convex in cross-section. An object (fig. 20, No. 3), which may have been a grattoir, but is incomplete, measures about $2\frac{3}{16}$ inches in length. It is made out of a piece of flat bronze, and, what appears to have been the stem, measures about $\frac{3}{4}$ inch in length, and is ornamented on one side by a double row of lozenge-shaped compartments; in the centre is a circular zone pierced by two holes. The lower portion is formed of an elongated oval, one surface of which is ornamented by a series of dot and ring marks. Another object (fig. 20, No. 4), which may have had some connection

¹ A brooch with thickened terminals, ornamented by a series of lozenge-shaped devices, is considerably smaller and somewhat coarser in make. It was found at Dowalton Loch, and is illustrated in *Ancient Scottish Lake-Dwellings*, by Dr. Robert Munro, p. 46, fig. 16.

with the toilet, is formed of a strip of bronze bent double round a ring which possibly may have been for suspension. At the lower end

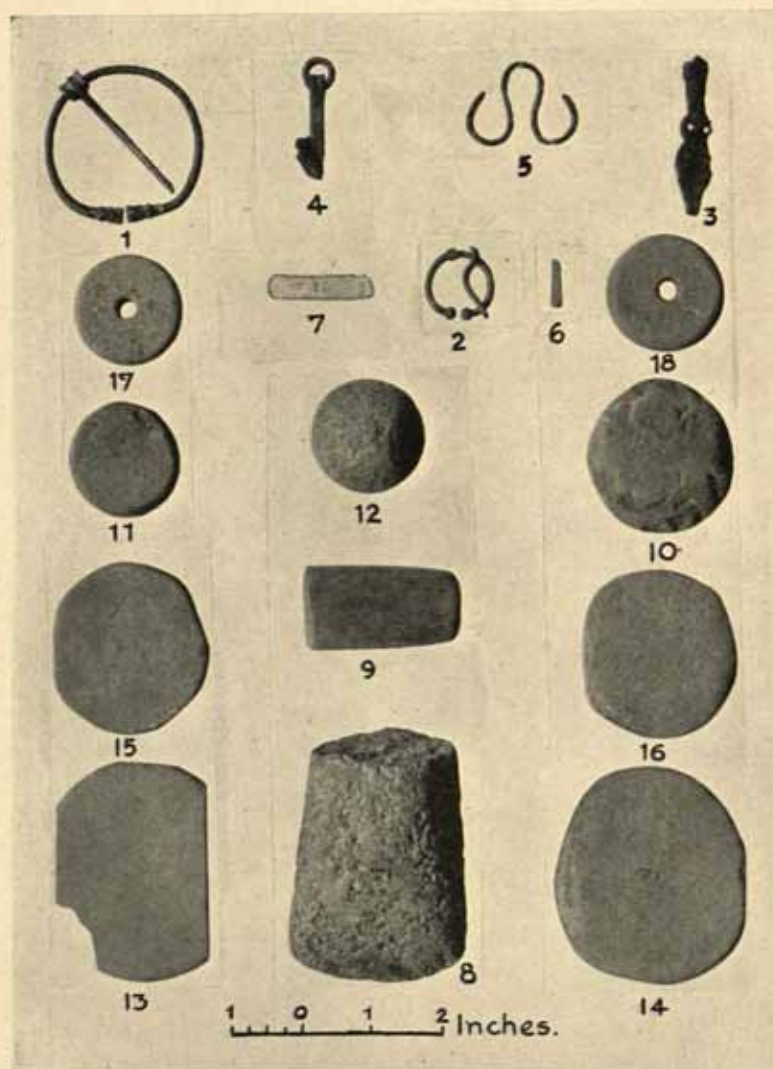


Fig. 20. Objects of Bronze, Glass, and Stone from the first level.

both strips are considerably bent and much corroded, and at the point of one strip is a small semicircular groove. A portion of what may have been a buckle, plano-convex in cross-section; a piece of wire (fig. 20, No. 5) which is bent in the form of two S-shaped curves placed

in opposite directions; a small chisel (fig. 20, No. 6), measuring nearly $\frac{11}{16}$ inch in length, and $\frac{5}{32}$ inch in breadth at the cutting edge, which is nicely fashioned; and a small piece of waste metal, were also found.

Glass.—A segment of an armlet (fig. 20, No. 7) of green translucent glass is plano-convex in cross-section, and is ornamented by a hook-like line of white opaque enamel trailed along its surface; another small fragment of an armlet is of the same material, and seems to have been similarly decorated; the base of a vessel of clear white glass, measuring about $1\frac{1}{4}$ inch in diameter, has a high projecting base rim surrounding an inner raised circle, which, however, does not come up to a level with the outer rim; a portion of the neck and rim of a vessel is of clear olive-green translucent glass, and is composed of two half-round mouldings placed horizontally; three fragments of the rim of another vessel are of a pale blue-green translucent glass; a number of other fragments of various thicknesses need not be described; a bead which was found in the soil after it had been removed from this level, but which is probably referable to it, is an oblate spheroid measuring $\frac{1}{4}$ inch in diameter.

Bead.—Several fragments of a bead of red amber came from section R. Unfortunately, this bead was broken by the spade.

Jet or Lignite.—An object of jet which seems to have been a flattened spheroid, but is fractured, may have been the head of a pin, and measures nearly $\frac{1}{2}$ inch in diameter.

Stone.—A portion, amounting possibly to about one-half, of a polished stone axe (fig. 20, No. 8) is of a brownish granite, measuring about $3\frac{3}{8}$ inches in length and $2\frac{3}{8}$ inches across the cutting edge, which is blunted; four whetstones or polishers vary in length from $4\frac{5}{8}$ inches to $3\frac{5}{8}$ inches; a polisher of fine-grained stone (fig. 20, No. 9) which is rectangular in cross-section, measuring $2\frac{3}{8}$ inches in length, shows marks of usage upon all its surfaces; two discoidal stones may have been pot lids (fig. 20, No. 10); a rectangular piece of coarse-grained sandstone, measuring about $2\frac{1}{8}$ inches in length, is slightly hollowed on one face; a small stone (fig. 20, No. 11)



Fig. 21. Penannular enamelled Bronze Brooch. (1.)

which is roughly circular is made of red sandstone, measuring about $1\frac{9}{16}$ inch in diameter and $\frac{11}{16}$ inch in thickness; a sling-stone (fig. 20, No. 12) which is nicely rounded measures $1\frac{9}{16}$ inch in diameter; a disc (fig. 20, No. 13) of fine-grained sandstone has measured about $3\frac{1}{8}$ inches in diameter and $\frac{9}{32}$ inch in thickness, is slightly hollowed on one surface, and came from section S. The peculiar interest attached to the last-mentioned stone is that it has been used as a smoother subsequently to the purpose for which it was originally intended.¹ It has already been stated that these discs belong to the second level, and the finding of this one on the first level, under the conditions above stated, would seem still further to emphasise this point. There are three fine-grained stones (fig. 20, Nos. 14 to 16) having two rounded and two straight sides which are not parallel. They vary in greatest length from 3 inches to $1\frac{5}{16}$ inch, and in thickness from about $\frac{3}{32}$ inch to $\frac{1}{4}$ inch. The two smaller examples are slightly hollowed on one face. The undernoted table giving a list of stones of this character shows the levels from which they came, and, as will be seen, no less than eight of these stones have been recovered during the past seven seasons' work. Therefore we may conclude that objects of this peculiar form were intentionally so shaped, and may be considered a type which has been made for a specific purpose. It will be observed that none has come from the fourth level, but we have two from the third level, three from the second level, and three from the first level.

Proceedings.		Levels.			
		4th.	3rd.	2nd.	1st.
<i>Stones having Two Rounded and Two Straight Sides which are not Parallel.</i>					
1914	vol. xlix. p. 191, fig. 38, No. 5 . . . .	...	...	1	...
1920	vol. lv. p. 180, fig. 14, No. 47 . . . .	...	1	...	...
1921	vol. lvi. p. 239, fig. 21, No. 8 . . . .	...	...	1 ¹	...
1921	vol. lvi. p. 256, fig. 21, No. 6 . . . .	...	...	1	...
1922	vol. lvii. p. 203, fig. 13, No. 42 . . . .	...	1	...	...
1923		...	...	...	3
		...	2	3	3

¹ From so-called 1A level.

¹ A polished stone disc which has a small segment awanting, and which came from the Crannog of Lochspouts, has evidently been used as a polisher or smoother in a similar manner to our example. It is illustrated in *Ancient Scottish Lake-Dwellings*, by Dr Robert Munro, p. 173, fig. 166.

Whorls.—There are two whorls and half of a third made of sandstone (fig. 20, Nos. 17 and 18).

Iron.—An object resembling a modern key to fit a nut (fig. 19, No. 5) is $2\frac{7}{8}$ inches in length. Across the key it measures $1\frac{1}{8}$ inch in greatest breadth. The stem, which is slightly thickened at the end, is pierced transversely by a hole, and is rectangular in cross-section. An object in the shape of a heavy pin (fig. 19, No. 6) has the head bent over and flattened on the stem. It measures $3\frac{1}{8}$ inches in length, and is $\frac{1}{8}$ inch in breadth across the head. An object of indeterminate use (fig. 19, No. 7) is $6\frac{1}{8}$ inches in length. One end measures $\frac{7}{8}$ inch in breadth, and decreases to $\frac{7}{16}$ inch towards what may have been the point. At about $1\frac{1}{4}$ inch from the broad end is a gradually swelling projection which rises $\frac{1}{4}$ inch above the plane of the stem. A hammer-head (fig. 19, No. 8), measuring $3\frac{7}{8}$ inches in length, is pierced by a rectangular hole measuring $\frac{3}{8}$ inch by $\frac{5}{16}$ inch. The butt end shows evidence of having been much in use.¹ Three fragments of conical ferrules are much corroded, and measure respectively $2\frac{3}{4}$ inches, $2\frac{1}{8}$ inches, and $1\frac{7}{8}$ inch in length. A pin with projecting elliptical ring-head has a broken stem, and measures 2 inches in total length (see table, p. 262). The extreme diameter of the head is $\frac{11}{16}$ inch by $\frac{9}{16}$ inch.² There is also a ring measuring $1\frac{9}{16}$ inch in external diameter.

Mould.—A block of sandstone has a mould for the casting of a bar or ingot cut out on one surface. The mould measures $4\frac{7}{8}$ inches in length, about $\frac{5}{8}$ inch in breadth, and about $\frac{7}{16}$ inch in depth. It will be remembered that this stone was found used as a kerbstone to a hearth, and thus, as has been explained, while coming from the first level it probably belongs to the second or earlier level. It is included in the table on p. 275.

Pottery.—As usual, Roman pottery from the first level is sparse. Several pieces of Samian ware, including portions of the rims and bases of vessels, have been recovered. One fragment shows decoration. Part of the neck and rim, which is considerably everted, of a bottle or vase is made of a fine paste, and is of a russet-brown colour. It is of a hard texture and is well fired. A handle has been joined to the top of the rim, and encircling the neck is a moulding which is divided by a shallow groove. There is a fragment of the rim and part of the neck of another bottle, but it is too small to describe accurately. A triangular shard of a large vessel, the rim of which is considerably everted, is made of a finely washed clay, and is of an orange-red colour. Between the rim


¹ One somewhat similar from the tumulus de Celles près Neussargues (Cantal), France, is illustrated in Déchellette, *Second Age du Fer*, p. 1373, fig. 607, No. 3.

² A similar pin made of iron was found in 1919 (*Proceedings*, vol. liv. p. 84, fig. 15, No. 7). References to others found are noted in same volume.

and the shoulder of the vessel, for $\frac{5}{8}$ inch, there is a concavity which on the inner surface becomes a convexity. Three shards of the rim of a vessel, possibly a cooking-pot, have been joined together. The rim is nicely rounded, and the pot when complete has measured about $9\frac{1}{4}$ inches in interior diameter. One shard, a portion of the base of a vessel, is of a grey ware, and there are a few fragments of cooking-pots which need not be described; there are two playing-men, fashioned from fragments of vessels, one of Samian ware, the other from a piece of fine-textured grey ware. The native pottery consists of a comparatively small number of shards, including several pieces of the rims and walls of vessels, but none seem of sufficient importance to warrant description.

Coins.—Only two coins have been brought to light this year, and both have come from the top level, section S. The first is a second brass of Constantius II.¹ (A.D. 335-61).

Obv. DN CONSTANTIVS PF AFD. Bust to r. laur.

Rev. SALVS AVG NOSTRI.  between A and ω .

The second coin is a fourth brass of the latter part of the fourth century A.D., probably Valentinian II. or Theodosius I.

In briefly reviewing the results of the excavations from the time of their commencement in 1914, many lessons have been learnt. We have ascertained beyond doubt that at least a portion of Traprain Law was inhabited during the late Bronze Age, and from the number of objects of flint and stone found we may tentatively suggest that the hill was occupied possibly in the late Neolithic Age. But with regard to the latter period no foundations of huts so far have been revealed. It is, however, from the Early Iron Age occupation of the hill that we have been able to gather most of our information. During this period of occupation, *i.e.* from the end of the first or beginning of the second century to the commencement of the fifth century, we have been able to prove the existence of a town or *oppidum* under continuous occupation.

In the many relics recovered we have proof of trade, especially with the Roman garrisons which occupied the country at no great distance away. We have also recovered relics having a Scandinavian origin, while certain other objects may be assigned a western European provenance.

As has been explained in previous years, the removal of the ground in arbitrary levels is necessarily incorrect when dealing with a continuous occupation, although such a method has its advantages. When we come to consider the top level of occupation, which of course was the last, we find comparatively few relics, and one is constrained to wonder why

¹ *Coh.*, vol. vii. p. 466, No. 176.

this should be the case. The answer to that question is perhaps not so difficult as it would seem. The inhabitants of the hill, for some unknown reason, appear to have deserted the site of their own free will about the beginning of the fifth century. It seems fairly certain that they were not put to the sword, as, undoubtedly, had such been the case, human remains would have been discovered belonging to the last occupation; but not even a human tooth, which would have withstood the ravages of time better than any bone, has been brought to light. But whether this desertion was in a measure hurried, possibly by the threat of invasion, or more or less leisurely, can hardly be determined; nevertheless, such an hypothesis would explain the dearth of relics, as the inhabitants seem to have had time to take with them most of their "goods and chattels." Whither did they go? This question is unanswerable in the light of our knowledge at the present time. But while we are unaware of the motives which prompted the inhabitants to abandon Traprain, it is worthy of note that at least two other so-called hill forts, and these in North Wales, were evacuated about the same time. Mr Willoughby Gardner, F.S.A., F.S.A.Scot., who excavated the hill fort of Dinorben, an account of which will be found in *Archæologia Cambrensis*, December 1921, says that the stronghold was destroyed "probably near the close of the fourth century. With the exception of a few comparatively recent objects, no relics definitely of later date than this have hitherto been found upon the hill top." Another hill fort, that of Moel Fenlli, Denbighshire, which was likewise excavated by Mr Willoughby Gardner, an account of which also appears in *Archæologia Cambrensis*, p. 252, for the same year, concludes by saying "... it will be seen that the occupation of the hill fort on Moel Fenlli came suddenly to an end about the middle of the fifth century A.D." He further tell us "that the stronghold was certainly inhabited by a native population as early as about A.D. 100, and from the gold coin of Nero picked up, that it probably existed about A.D. 70, when Roman soldiers were on the spot ... none of the finds recorded postulate an occupation before the first century A.D."

It is interesting to note that the conclusions arrived at by Mr Willoughby Gardner as to the commencement of the Early Iron Age occupation and the final evacuation of these two Welsh hill forts, coincide in a remarkable degree with those concerning Traprain. Until other similar sites in Scotland are excavated, it is impossible to say whether a general evacuation of hill forts took place about this period, and within the limits of this paper one cannot go deeper into the question.

The sincere thanks of the Society are again due to The Right Hon. The Earl of Balfour for his unfailing kindness in allowing the excavation to be continued, and also for his generosity in donating all the relics

found to the National Museum. The Society is also greatly indebted to Mr Mark, the tenant of Traprain Law, for his courtesy in permitting the excavations to be carried on. I must once more express my gratitude to Dr George Macdonald, C.B., for his kindness in identifying the coins found, and to Mr J. Graham Callander, Director of the National Museum, for his valuable assistance and advice so kindly placed at my disposal on frequent occasions.

MONDAY, 14th April 1924.

JAMES CURLE, W.S., in the Chair.

A Ballot having been taken, the following were elected Fellows:—

Mrs ASHWORTH, 69 Braid Avenue.

Rev. CHARLES D. BENTINCK, The Manse, Dornoch, Sutherland.

ALEXANDER MACKENZIE FLEMING, 1 Madeira Street, Dundee.

JOHN KENNEDY, 55 Marchmont Road.

GEORGE DODS MACKAY, 11 Boswall Quadrant.

JOHN MACKECHNIE, M.A. (Hons.), 3 Eldon Terrace, Partickhill, Glasgow.

JAMES D. OGILVIE, Barloch, Milngavie.

DONALD ROSS, M.B., Tigh na Linne, Lochgilphead.

FREDERICK W. D. STEWART, M.A., The Schoolhouse, Davidson's Mains.

W. GLASSFORD WALKER, C.A., 2 Denham Green Avenue, Trinity.

GEORGE MACKIE WATSON, Architect, 50 Queen Street.

The following Donations to the Museum were intimated, and thanks voted to the Donors:—

(1) By JOHN EWING, 1B Summerside Place, Leith.

Whetstone of schist, $3\frac{3}{16}$ inches long, perforated at one end, found on Sule Skerry, Lewis.

(2) By Major BROUN LINDSAY and Mrs BROUN LINDSAY, F.S.A.Scot.

Cinerary and Incense-Cup Urns, a bronze Awl, a bone Pin, and a flake of Chert found in a ruined cairn at Muirkirk, Ayrshire. (See subsequent communication by Mr Archibald Fairbairn, Corresponding Member.)

- (3) By M. E. CUNNINGTON (Mrs B. H. CUNNINGTON), Devizes.

Nineteen fragments of Early Iron Age Pottery from a La Tène I. site at All Cannings Cross, Wilts.

- (4) By ALEXANDER O. CURLE, F.S.A.Scot.

One hundred and thirty-seven Lantern Slides used to illustrate the Rhind Lectures delivered in 1918 on "The Prehistoric Monuments of Scotland," and sixty Slides illustrating "The Treasure of Traprain."

The following Donations of Books for the Library were announced :—

- (1) By The TRUSTEES OF THE BRITISH MUSEUM.

The Lindisfarne Gospels. Three Plates in Colour and thirty-six in Monochrome from Cotton MS. Nero D. IV in the British Museum, with pages from Two Related Manuscripts. With Introduction by ERIC GEORGE MILLAR, F.S.A., Assistant in the Department of Manuscripts, British Museum.

- (2) By GEORGE F. BLACK, Ph.D., Corresponding Member, the Author.

A List of Works relating to Scotland in the New York Public Library.

- (3) By Rev. J. KING HEWISON, M.A., D.D., F.S.A.Scot., the Author.

The Romance of Bewcastle Cross.

- (4) By FRANCIS BUCKLEY, M.A., Tunstead, Greenfield, Yorkshire, the Author.

A Microlithic Industry of the Pennine Chain, related to the Tardenois of Belgium.

- (5) By The Right Hon. LORD ABERCROMBY, LL.D., F.S.A.Scot.

The Palace of Minos. Vol. i.—The Neolithic and Early and Middle Minoan Ages. By Sir Arthur Evans, D.Litt., etc.

The following Communications were read :—

I.

A SHORT CIST CONTAINING A FOOD-VESSEL AND HUMAN REMAINS AT BRIDGENESS, WEST LOTHIAN. BY J. GRAHAM CALLANDER, F.S.A.SCOT., DIRECTOR OF THE NATIONAL MUSEUM OF ANTIQUITIES. WITH A REPORT ON THE SKELETAL REMAINS BY PROFESSOR THOMAS H. BRYCE, M.D., F.R.S., F.S.A.SCOT.

At Bridgeness, the eastern extension of the town of Bo'ness, on the southern shore of the Firth of Forth, is a small plateau faced on the north with an outcrop of whinstone, and elevated between 40 and 50 feet above sea-level. The site is easily located, as near its northern edge is Bridgeness Tower, a high circular building within which, it may be mentioned, is incorporated an old windmill built in 1750. Behind it, to the south, the land rises sharply to a height of more than 150 feet, while in front, to the north, between it and the water's edge, is a stretch of about 200 yards of flat ground, to a large extent reclaimed from the Forth during the last seventy years.

In early times the plateau, formerly known as the Vitriol Park, from a chemical work in existence here a century ago, would appear as a low promontory, the sides of which would be encroached upon for some distance by the tide. On its western side, about 30 feet above Ordnance datum, a level deposit of shells was recently brought to light during excavations for the foundation of a retaining wall, which has now been built, to support one side of a new bowling-green for the local Miners' Welfare scheme. The deposit of shells, where exposed, was covered by about 4 feet of soil, and showed a very regular thickness of about 10 inches, except at the edges where it tailed out. Although the possibility of the shelly layer being a kitchen-midden, perhaps contemporary with those belonging to the Azilian period which have been found in the west of Scotland, was considered, I think there is no doubt that it has been formed by natural agencies. Generally the shells are of small size, and a large proportion are broken into mere fragments; many water-rolled pieces of shale also are to be found amongst the shells. In the prehistoric kitchen-middens of the Scottish coasts, limpet, periwinkle, cockle, and oyster shells are most abundantly found, but at the site under discussion the relative proportion of these shells is very small. After being washed, a heaped double handful which I brought away was found to consist, for the greater part, of shells broken into very small fragments, there being only three small limpets, three pieces of small cockles, and a bit of an oyster shell the size of a penny.

A small piece of bone was found amongst the shells, but this was not kept, and Mr H. M. Cadell of Grange, the proprietor of the ground, found in the layer a sub-oval piece of thin water-worn shale, measuring 5 inches by $2\frac{3}{4}$ inches, with one side wrought to an angled edge by what resembled rough filing from both faces. It seems an undoubted artifact, but its purpose is not apparent.

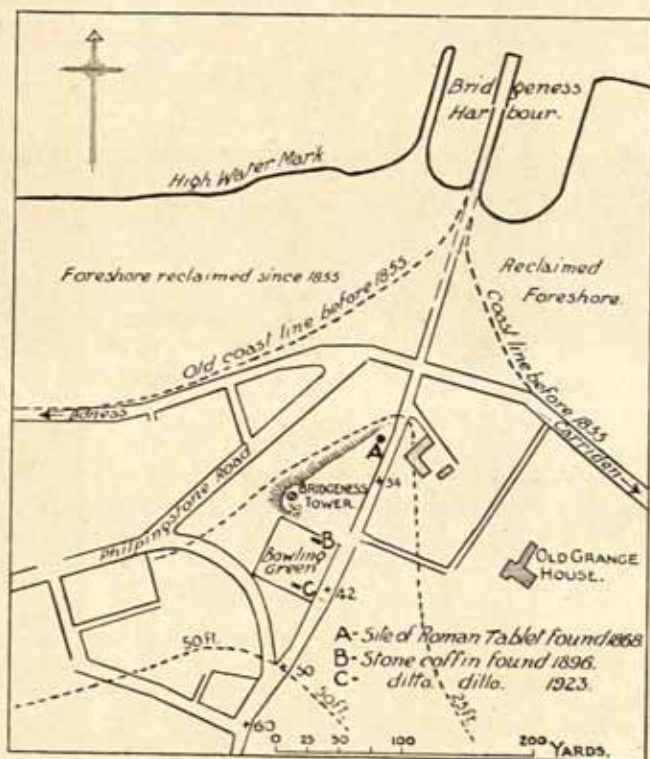


Fig. 1. Plan of Discoveries at Bridgeness.

During the early Bronze Age the site had proved attractive to the people of the district, as two short cists of this period, each containing an urn of the food-vessel type, have now been discovered on it. A third and smaller cist full of earth but with no bones or urn was also found between the others. Besides these a human skeleton without any enclosing structure was recently found, but there was nothing associated with it by which its period could be determined. In addition to the cists mentioned, another containing unburnt human remains and a food-vessel was unearthed at Cowdenhill about 300 yards to the westward.

Later on this locality was visited by the Romans, who erected the eastern terminal fort of the Antonine Wall in the neighbourhood.

The famous sculptured and inscribed tablet set up by the Second Legion, which is now preserved in our National Museum, was found in 1868, near the north-eastern corner of the plateau, at the spot marked A in fig. 1.

The first cist, which was discovered in 1896 (B in fig. 1), contained the remains of the skeleton of a man and a food-vessel. These were handed over to Sir William Turner, who placed them in the Anatomical Museum in the University of Edinburgh, and published a description of the skull and urn in the *Transactions of the Royal Society of Edinburgh*, vol. li. pp. 187, 189.

A well made, finely polished stone axe (fig. 2), measuring $4\frac{1}{8}$ inches in length, $2\frac{1}{8}$ inches in breadth, and $1\frac{1}{8}$ inch in thickness, with the top and bottom sides ground flat, was found near the grave.

The Cowdenhill cist was discovered in 1905, and a report on it by Mr Cadell appeared in our *Proceedings*, vol. xl. p. 316. Mr Cadell, who excavated the grave, had the cist re-erected



Fig. 2. Stone Axe found at Bridgeness. (Ca. $\frac{1}{2}$.)



Fig. 3. Cowdenhill Cist as re-erected.

in the garden of the old house of Grange, where it is now to be seen (fig. 3). The bones contained in the cist were too fragmentary

to give an indication of the sex of the individual, but the urn (fig. 4) is a very fine example of a food-vessel, the square-sunk moulding on the top of the lip being quite unusual.

The second Bridgeness cist was brought to light in the middle of November last, by workmen excavating ground for the formation of a bowling-green, at C on fig. 1, about 50 feet south-south-west of the spot where the first cist was found. On the cover-stones being encountered, Mr Cadell was informed of the discovery, and he had one of the slabs raised, when human bones were seen lying on the gravelly bottom of the grave. The stone was replaced, and the discovery having been reported to the Museum, I went out to the site a few days later and assisted Mr Cadell in the examination of the burial.

The cist (fig. 5), which was formed of four thin slabs of the yellow sandstone set on edge, was a very good example of this class of grave. It was sunk in gravel, and was covered by about 4 feet 6 inches of soil. The main axis lay 98° west of north magnetic, and in shape it was almost rectangular. The grave measured internally 3 feet 11 inches and 3 feet $6\frac{1}{2}$ inches along the north and south sides, 2 feet $1\frac{1}{2}$ inch and 2 feet $4\frac{1}{2}$ inches across the east and west ends, and 1 foot 6 inches in depth. The slabs forming the cist, which probably came from outcrops of sandstone in the bluff to the south-east of the site, were of very regular thickness, those on the north and south sides averaging $4\frac{1}{2}$ inches and $3\frac{1}{2}$ inches in thickness, and those at the east and west ends $1\frac{1}{4}$ inch and 2 inches. The ends were inserted between the sides, which projected about 4 inches at the west end but were flush at the east end. The tops of the slabs were almost level, except at the north-east and north-west corners, where single thin stones were inserted. There were no signs of clay luting between the slabs at the corners, and the floor was neither paved nor causeyed. The mouth of the cist was covered with a long thin slab along the northern side and by two short slabs on the south side, the openings between these stones being closed with smaller slabs.



Fig. 4. Food-vessel from Cowdenhill.

When the cover-stones were removed, the remains of two skeletons and a complete urn were exposed on the floor of the grave quite clear of soil, none of which had percolated into the chamber, as so frequently happens when the soil is of a sandy nature.

The better preserved skeleton, which is that of a man about thirty years of age, probably about 5 feet 6½ inches to 5 feet 7 inches in height, lay in a crouching position on its right side with the skull near the centre of the west end, the face to the south, the hands in front of the chest, and the knees drawn up in front of the body. The second skeleton,



Fig. 5. Short Cist with Skeleton and Urn at Bridgeness.

which is that of a child about seven years of age, was placed in front of that of the man, as two pieces of the child's skull lay close to the face of the other. Behind the skull in the north-west corner of the grave was the urn (fig. 6), a very small, perfect example of the food-vessel type, standing on its base, slightly tilted towards the centre of the cist. It is formed of dark brown ware, and measures 3½ inches in height, 3½ inches in external diameter at the mouth, 4½ inches at the bulge, and 2½ inches across the base. The vessel is bowl-shaped, the sides being curved instead of angular at the widest part, and the broad lip is sharply bevelled downwards towards the interior. The decoration on the wall consists of two broad bands entirely covering it, and separated from each other just below the bulge by three transverse lines of a roulette-like pattern,

which seems to have been formed by winding tightly round a core a thin twisted cord and impressing it on the clay while soft. The upper band shows seven panels filled with the impressions of a triangular stamp, sunk most deeply at the obtuse apex in two, three, and four vertical rows; two and four, which adjoin, occur only once, and three occur five times: these panels alternate with groups of three, four, and five roulette-like vertical lines, four occurring four times, three twice, and five once. The lower band which covers the tapering lower half of the vessel is covered by triangular marks similar to those just described, only the apex of the triangle is placed towards the right. On the bevelled top of the rim are three concentric circles of impressions formed with the same triangular stamp.

The thanks of the Society are due to Mr Cadell for so kindly presenting the urns from the second Bridgeness cist and from the Cowdenhill cist, to the National Museum.



Fig. 6. Food-vessel from the second Bridgeness Cist.

REPORT ON BONES FROM THE SECOND BRIDGENESS CIST.

By Professor THOMAS H. BRUCE.

The bones recovered from the cist represent two individuals, an adult male under thirty years of age and a child of seven. The adult skeleton is very incomplete, but sufficient remains for the determination of the age and sex, and for the computation of the stature of the individual.

The skull was complete when first removed save for the upper part of the face, which was broken away, and the left side of the base. Unfortunately, the remaining part of the base, which was extremely fragile and almost unsupported, collapsed during manipulation. The vault, however, is whole, and yields data for conclusions regarding the shape of the cranium. All the sutures are open, and show no sign of commencing closure, even on the inner surface. As closure of the sagittal

suture begins under thirty, it may be concluded that the individual was not over that age. The teeth in the lower jaw, the greater part of which remains intact, show a certain amount of wearing of the crowns. All three molars are in position, indicating that the person had attained adult age. The vault is of oval shape looked at from above, and the sides of the skull are "well filled." The glabella is prominent and the supra-orbital ridges are well marked. The frontal bone above the glabella does not rise vertically, but arches with a full curvature to the vertex.

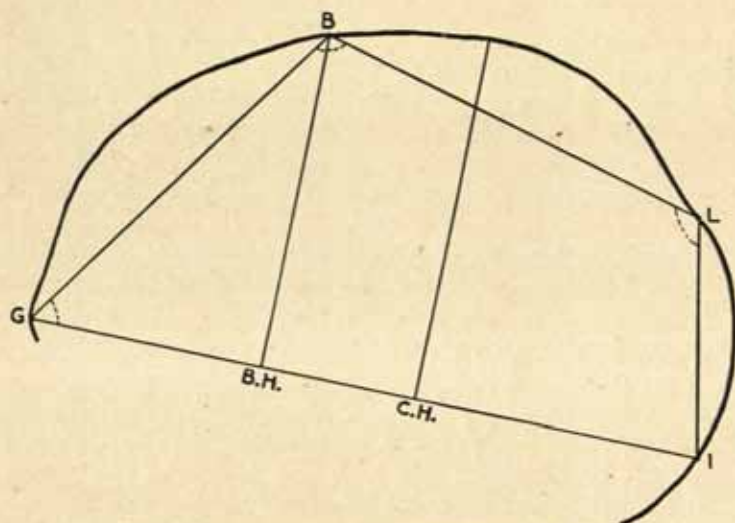


Fig. 7. Sagittal Outline of Bridgeness Skull. ($\frac{1}{2}$.)

From these features of the forehead it may be concluded that the individual was in all probability a man. The glabello-occipital diameter is 187—a fairly high but moderate figure—and the transverse diameter is 142 mm. The cephalic index is therefore 75.9, and the skull falls on the borderland of the dolichocephalic class. Owing to the absence of the base and of the face it is not possible to ascertain the altitude of the vault nor the height of the face, but the accompanying tracing of the sagittal outline of the vault (fig. 7) and measurements made on this outline will provide certain data regarding the characters of the skull.

Glabella-inion length	180 mm.
Calvarial height	99 "
Maximum breadth	142 "
Distance of foot point of calvarial height from glabella	105 "
Distance of bregma foot point from glabella	61 "

Length of frontal arc	124 mm.
" " chord	110 "
" parietal arc	123 "
" " chord	110 "
" supra-inial arc	66 "
" " chord	63 "
Bregma angle (Schwalbe)	55°3'
Angle between frontal and parietal chords	110°
Lambda angle (Schwalbe)	79°
Angle at lambda	116°5'

The vertebral column and ribs are represented by small fragments only, which yield no information.

Upper Extremity.—The bones of the arm which have been preserved entire are the right scapula, the left humerus, the right radius and ulna, various carpal and metacarpal bones, and some phalanges. The ossification is quite complete in all the bones, indicating that we have to do with the skeleton of a person of full adult age. The bones show no special features to distinguish them from modern bones. They are all well-formed and well-marked bones, but do not suggest a specially muscular person, and the forearm bones, especially the ulnæ, are more delicate and slender than those of an average individual. They have undergone a good deal of superficial erosion, presumably post-mortem, but even allowing for this, the shafts of the ulnæ are remarkably slender. The maximum lengths of the long bones are as follows:—humerus, 33·0 cm.; radius, 26·5 cm.; and ulna, 28·3 cm.

Lower Extremity.—The whole of the ventral part of the pelvis has decayed away, but, fortunately, the bodies of both hip-bones have been preserved. The characters of the sacro-sciatic notches can therefore be determined. On both sides the notch is specially narrow, and its upper border descends abruptly behind. This is a feature distinctive of a male bone, and we can therefore, even in the absence of the pubic arch, identify the skeleton as that of a man.

The long bones are well developed and of average dimensions. The femur measures 47·0 cm. in its maximum length, and the tibia 37·5 cm. These figures furnish data for the calculation of the stature of the individual. The application of Pearson's formula for the femur and tibia combined brings out his stature at slightly over 169 cm., *i.e.* between 5 feet 6½ inches and 5 feet 7 inches. The femur does not show an appreciable degree of flattening below the trochanters. The transverse diameter is 33 mm., and the antero-posterior 27 mm., giving a platymeric index of 81·8. The linea aspera is rather more prominent

than in many bones, and the shaft of the bone is fairly strongly curved. The dimensions are transverse diameter 24 mm., and antero-posterior diameter 29.5 mm., giving a pilasteric index of 122.9. The tibia shows no bending back of the head, and it is not markedly flattened from side to side in its upper third. The antero-posterior diameter is 35 mm., and the transverse diameter 27 mm., yielding a platymeric index of 77.1. There is no indication of the so-called squatting facets on the lower end of the tibia. The feet have suffered more decay than the hands. Portions of the talus and calcaneus of both sides have been preserved, but the talus is too much injured to permit of an estimation of the angle of the neck. Only one metatarsal (the fifth) is present. It is rather shorter than usual.

The skeleton of the child is represented by part of the frontal region of the skull, the temporal bone of one side, a part of the upper, and a part of the lower jaw. A fragment of the upper end of the right thigh bone is the only part of the skeleton of the limbs which remains. From the teeth it is possible to estimate the age of the child. The fragments of the jaws show only the milk molars in position, but in both the upper and the lower jaw the socket for the first permanent molar is developed and the tooth has fallen out. As this tooth erupts at the end of the sixth year, it may be concluded that the child had reached that age. The second permanent molars are still enclosed in their crypts; the premolars have not erupted; and in the upper jaw the permanent lateral incisor which erupts in the eighth year is still completely enclosed in its crypt. The portion of the jaw holding the median incisor is broken away. From the evidence it may be concluded that the child was over six and under eight years of age.

II.

TWO SCULPTURED STONES RECENTLY FOUND IN ORKNEY. BY
HUGH MARWICK, M.A., F.S.A.Scot.

STONE FROM BURNESSE, FIRTH, ORKNEY.

In the autumn of 1922 I received word from a friend that a curious stone had come to light at a "pict's house" in Firth, where some excavation was being made to procure stones for dike-building. On going out, I discovered that the site was that of a broch—known as the Chapel Knowe, which lies close to the beach at the point of Burness, on the north side of the Bay of Firth. It was this site, indeed, that gave rise to the name Burness, and the fact of its now being called the Chapel Knowe simply shows that here, as so very often elsewhere in Orkney, a chapel has been erected at the site of a ruinous broch in order to get stones without quarrying. The precise site of the chapel is not now apparent, and the recent digging showed no trace of such a building.

A breach had been made into the west side of the mound, and a portion of inward curving wall was exposed to view—probably the inner wall of the broch. From the curve thus exposed I calculated that the interior must be about 20 feet in diameter. A puzzling feature, however, meets one in the inward batter of the exposed wall. The height exposed is only about 5 feet, but even on that small portion there is an inward batter of a foot. This may conceivably have been due to the weight of a huge superincumbent mass of ruins once upon a time, but the mere couple of feet or thereby of earth that is at present above the wall could not possibly have produced such an inward thrust, and I am very doubtful of any such explanation. But until further excavation takes place it is not possible to say anything definite as to the building, of which only a small portion has as yet been revealed.

The stones encountered in the cutting had been thrown out on each side, and it was among these that the present stone was first noticed by Mr Turfus, draper, Finstown, when on a visit there to view the newly-found "pict's house."

I brought the stone back with me, and reported the discovery to the estate factor, Mr Duncan J. Robertson, O.B.E. At their next meeting, the Stewart Endowment Trustees, proprietors of the Burness property, decided most generously to present the stone to the National Museum.

The stone itself (fig. 1) is a most curious and puzzling relic. It measures 40 inches in length, tapers slightly in breadth from 8 inches at one end to 6 inches at the other, and in thickness it tapers also from about $2\frac{1}{2}$ inches at one end to about 1 inch at the other. It is of the dark grey or blue stone (Old Red Sandstone) which is so commonly seen on the Orkney beaches. Only one face shows any signs of human workman-



Fig. 1. Central portion of Sculptured Slab from the Broch of Burness.

ship, and, at first sight, this looks as if an idle boy with a pocket-knife or a nail had been amusing himself simply by making indiscriminate scratches or scorings all over it. Closer inspection, however, shows in addition to the scratchings a very delicately incised human figure about $2\frac{1}{2}$ inches in height. It is wearing a gown or cloak reaching below the knees, and is depicted in profile looking towards the left. One of the two nearly parallel incised lines that may perhaps denote the open front of the cloak is produced upwards and curved to form the outline of the head. The other is continued round as far as the eyebrow, and at the

top of the head these two lines are connected by a series of short cross strokes. The most curious parts of the dress are three little crests that adorn the head. They are shaped somewhat like the figure 9—one, however, facing the other way—*e*. Along the foot of the cloak is a hem which seems adorned with zigzag ornament. What sort of person is represented I do not know. I have never seen any figure exactly like it, and content myself therefore by drawing attention to the accompanying illustration, which shows it better than any explanation.

In front of this figure are some puzzling incisions, which may be meant to represent some living object, but are too indeterminate to warrant any suggestion. Below the figure is something which might perhaps be interpreted as a phallic symbol, but that, too, is doubtful. The rest of the scratches seem altogether meaningless, but it should be noted that one end of the stone has been broken off, and though diligent search was made for it no trace could be found.

Only one other point demands notice. Is the stone to be ascribed to the chapel which stood somewhere close by or to the earlier broch? One cannot be positive, but (1) as it is unlike anything found, so far, in connection with a chapel, and (2) as the figure cannot be identified with any known ecclesiastical figure on sculptured stones or elsewhere, and (3) as no signs of the chapel foundations were revealed by the excavation, I am disposed to ascribe it to the earlier edifice.

SYMBOL STONE FROM GREENS, ST ANDREWS, ORKNEY.

On the 7th of December 1923 I was informed that a stone with curious markings on it had been unearthed at Greens, St Andrews, Orkney. The following day I went out to see the discovery, and recognised it at once as an admirable example of a Celtic sculptured stone.

It was discovered by Mr D. Laughton—farmer and proprietor of Greens—at a distance of only 3 or 4 yards from the north-east corner of his farm buildings. He had been digging a drain to draw off the surface-water that the phenomenally wet season had caused to accumulate round the house, when at the depth of only a foot he came upon this stone lying flat on its face. He most generously agreed to my suggestion of presenting the stone to the National Museum, and this Society is deeply indebted to him for the donation of so fine and interesting a memorial.

The stone (fig. 2) is an undressed slab of yellowish freestone—roughly a parallelogram in outline—measuring 6 feet 1 inch in length, 1 foot 10 inches in width at the broadest part, and from 6 to 7 inches in thickness.

The sculpturings occupy only a little more than half of one face. The incised figures are three in number, and have been graven carefully with a sharp tool. They are wonderfully well preserved, and the fact that they show so little weathering suggests that the stone had not stood erect and exposed to the inclemencies of the Orkney weather for any length of time.



Fig. 2. Symbol Stone from Greens.

The uppermost symbol is known as the mirror-case symbol, and, though rarely met with elsewhere, this is the third specimen found in Orkney. The lowermost symbol is the much more frequent mirror symbol, but, though there is ample room alongside, there is no sign of the comb that often accompanies it. The middle symbol is the most frequently occurring of all, and is known as the crescent and V-shaped rod symbol. The interior of the crescent is occupied by simple symmetrical ornamentation, and it will be noted that the projecting ends of the V-rod are dissimilar.

This special combination of symbols has not been found elsewhere.

The present stone is the fourth object reported from Orkney as exhibiting these Scottish symbols, and it is gratifying to know that all four have found a safe resting-place in the National Museum. The first was a triangular slab found in Firth and presented by Mr George Petrie. It is figured in *Early Christian Monuments of Scotland*, part iii. p. 20, fig. 16, and shows the rectangular symbol at the top and the crescent and V-shaped rod below. The second, *Early Christian Monuments*, part iii. p. 21, fig. 17, formed the sill of a window in St Peter's Church, South Ronaldsay, and was presented through Mr W. H. Fotheringham in 1853. On one side it has the rectangular symbol at the top and the crescent and V-shaped rod below, while on the other it has the crescent and V-shaped rod above and the mirror-case below. The third object was the phalangeal bone of a small ox found in the Broch of Burrian, North Ronaldsay, and presented by Dr W. Traill in 1872. On one side of this appears the crescent and V-shaped rod, and, on the other side, the mirror-case symbol. Outside of Orkney, the

only example of this last symbol is that on a stone found at Kintradwell in Sutherland.

I am glad to say that Mr Callander informs me that the Greens stone now described is the best example of its special class to be found in the Museum.

I am indebted to Mr Thomas Kent, photographer, Kirkwall, for the photographs of the stones, from which the illustrations have been made.

III.

FOUR PIECES OF CARVED WOODWORK FROM STIRLING CASTLE.

By C. E. WHITELAW, F.S.A.Scot.

Of the original fittings and furnishings of Stirling Castle very little now remains. It is therefore of interest when fragments that have disappeared are recovered.

The four pieces of woodwork that are the subject of these notes were acquired by me between the years 1903 and 1912, and may be described as follows.

No. 1 consists of the central board of three, originally forming a circular panel (fig. 1), measuring 1 foot 10 $\frac{3}{4}$ inches in height and 14 $\frac{1}{2}$ inches in breadth. It is carved out of native oak, and bears a full-length figure of a man dressed in a long overall; on his head he wears a broad, flat bonnet with a curling ostrich feather, and on his feet are "bear paw" shoes. In his right hand he holds a knife or sword of iron, and in his left the fragment of some object whose character cannot now be determined, as only the terminal part remains. There is a water leaf border, and on either side of the figure a floral swag. Those who are conversant with the stone statues decorating the front of the palace will recognise in the curious, clumsy proportions of the figure represented on this panel the handiwork of the same artist.

A small booklet published in 1817, and entitled "A Collection of Heads Etched and Engraved after the Carved Work which formerly Decorated the Roof of the King's Room in Stirling Castle," illustrates all the fragments then surviving. This magnificent ceiling, becoming insecure, was torn down and thrown out in 1777. The piece shown to-day is illustrated as No. 36, but as it is evidently not part of the ceiling, it must have formed part of an overmantel or panel over a doorway. The booklet states that in 1817 it was in the custody of the Provost and Magistrates of Stirling. The Catalogue of the Naval and Military Exhibition, Edinburgh, 1889, shows it as an exhibit (No. 1065) lent by

John Dick of Craigengelt, at one time, I understand, Provost of Stirling. It was purchased from a dealer in Edinburgh, who apparently obtained it from some connection of Mr Dick. At this time the surface was covered with paint to imitate oak, but this has been removed and the whole oiled and waxed.

The date of the carving may be put at the middle of the sixteenth century.

No. 2 is a carving in native oak of the Scottish Lion marchant (fig. 2). It measures 1 foot 8 $\frac{3}{4}$ inches in breadth and 9 $\frac{1}{4}$ inches in height, and is said to have come from Stirling Castle, where it doubtless formed part of a frieze in the King's Audience Chamber. It has been stripped of a thick coat of paint and the surface oiled and waxed. An illustration of it is seen in MacGibbon and Ross's *Castellated and Domestic Architecture of Scotland*, where it appears as a tail-piece to one of the chapters. This panel was obtained at the dispersal in 1912 of the effects of Miss Stewart, Fernbank, Dunblane.

Nos. 3 and 4 are the doors of a French cabinet elaborately carved out of walnut, showing a figure-subject in the centre framed in a heavy enriched moulding, measuring 14 $\frac{1}{2}$ inches by 14 $\frac{1}{2}$ inches. The first of these (fig. 3) illustrates the first labour of Hercules—the slaying of the Nemean lion; the other (fig. 4) illustrates the tenth labour of Hercules, in which he drives the herds of Geryon to Argos. The whole door is carved out of one



Fig. 1. Wooden Panel from Stirling Castle.

piece except the moulding at the ends, which is dovetailed in.

They are evidently French work of the late sixteenth century.

The panels were obtained from the same dealer as No. 1. They were shown at the Naval and Military Exhibition, Edinburgh, 1889 (Nos. 1041 and 1048), on loan from John Dick of Craigengelt. At that time they were covered with black varnish, which I removed and treated in the same way as the others.

PIECES OF CARVED WOODWORK FROM STIRLING CASTLE. 301

The late Mr Wm. Christie, watchmaker and curio dealer in Stirling, informed me that he sold No. 4, possibly also No. 3, to Mr Dick, having



Fig. 2. Wooden Panel from Stirling Castle.

previously obtained it from a man who ran the canteen in Stirling Castle before the army took that work into its own hands. This man's wife



Figs. 3 and 4. Wooden Doors of Cabinet from Stirling Castle.

also looked after the Douglas Room. When he left the Castle he claimed as his property several old carved Jacobean high-backed chairs.

Fortunately the then commanding officer refused to believe his story and they are still in the castle.

The above notes suggest that down to a comparatively recent time there must have been a considerable amount of old furnishings of the castle still in the building, and that vandalism and systematic pilfering have caused nearly every piece to vanish.

The fragments exhibited to-day have been presented to H.M. Office of Works for permanent preservation within the Castle of Stirling, in the hope that others in possession of similar relics may follow the lead here given.

IV.

THE PRINGLES OF FOUNTAINHALL AND SOUTRA.

By ALEX. PRINGLE, M.A., B.Sc.

Under the "County Homes of Scotland" in a late number of the *Scots Pictorial* appeared an article entitled "Fountainhall, East Lothian," which was beautifully illustrated. The house was considered mainly from an architectural point of view. Of its history, and of the Pringles who occupied it during the fifty years that preceded the Lauders, little seemed known, and no interpretation of the monogram and the various initials that appear on the eastern wing of the building was offered. Information on these points supplementary to the article quoted is therefore a desideratum, and is herewith given.

And first as to the origin of the surname Pringle. The first to bear it in the records is Robert de Hoppryngil of the "Soltre Chartulary," who witnessed a charter at Soutra Monastery about 1275, during the reign of Alexander III. Hoppringill is the name of a place, like its cognate Hopkailzie (now Kailzie), etc. In the older records it is found two or three times unabridged as Hoppringhill, which hill—on the side of which it is situated in the parish of Stow—after rising to a height of about 1000 feet, abuts at its western extremity on the Gala in a remarkably rounded contour. Douglas, an unscrupulous genealogist, in order to support the absurd derivation of it from the Welsh *Ap* and *pilgrim*, and, by inserting an "r" into Pingle, his assimilation of the Hoppringills with the Pingles of Whitsome and Aberdeen—a widely spread English family, members of which had migrated into Scotland with David II.—split the surname in two, as Hop-Pringle, a hyphenated form of which not a single instance is to be found in any record prior to his day, and a manifest fabrication, which if applied to the other

great Border clans would give us the Arm-Strongs and the Turn-Bulls! The dominant spelling in the records down to 1600 is Hoppringill, between 1600 and 1650 Pringill, and after that Pringle; but the Hoppringles of that ilk never dropped the prefix, John, the last of that long-descended line, who died in 1737, always signing himself Hoppringle.

The only other Hoppringill to be met with in the thirteenth century is Elys de Obrinkel, whose name is entered thus in the famous Ragman Roll at Berwick on 28th August 1296, along with those, in similar disguises, of his immediate neighbours, as a tenant of the Bishop of St Andrews in Midlothian. The spelling is similar to Obendrit and Obbarris for Hopebendrit and Hopebarris in Shropshire, of the same period, while rink is only the less guttural form of ring. His seal is probably that numbered 188 in the list of unattached Scottish seals given in vol. ii. of the *Calendar of Documents*, described as "Oval, a hunting-horn, S. Helias de Hoprigkil," the letter "n" being represented by the customary superior stroke.

FOUNTAINHALL.

To resume. John Sinclair, who had a kindly tack of Ewingston, died in 1550, and Robert Hoppringill, brother german of George of Torwoodlee, married his widow Alison Harwood, promising in 1555, it was alleged, to vacate the tack when Sinclair, junior, came of age. By his spouse Robert had three sons—(1) Robert; (2) William; (3) John—and three daughters. Robert, the eldest, who predeceased his father in 1579, left by his spouse Margaret Ker a daughter Marion, whose curator was William Hoppringill of Westhousebyre. We next find Robert and his second son William further down the valley in the neighbouring farm of Milton; and here, according to his testament, Robert died in 1582.

William Pringill in Milton, who died in 1637, by his spouse Elizabeth Baptie had issue: (1) Robert of Templehalls and Woodhead, W.S.; (2) John, the elder, in Milton, of Soutra and Blackshiels; (3) John, the younger, of Magray, who died in 1629; (4) William, in West Pencaitland, who died in 1645; (5) George, in Magray, who died in 1630; (6) James, in East Spott Mill; and three daughters.

Robert, William's eldest son, appears to have served his apprenticeship in the office of John Gray, public notary, Haddington, where in 1598 he writes a charter. In January 1606 we find him a notary in the office of John Easton, W.S., Edinburgh. Between that date and March 1614 he wrote fourteen charters for Easton, was twice a donator of escheats, and once an assignee of a debt. Easton was married to Margaret Cant of St Giles Grange. Robert Pringill married Violet Cant of the same family. John Easton dying in 1616, Robert and Mr John

Cant of the Grange, apparently his brother-in-law, act as curators of his son and heir John Easton. Robert succeeded John Easton as a Writer to the Signet, and became the leading W.S. of his time. As to his work, suffice it to say that he and his servitors or clerks, of whom some twenty are named, appear in the Register of the Great Seal alone some 230 times: and it is interesting to note that amongst his clientèle were included all the principal Pringills of his time, as those of that ilk, Smailholm, Whytbank, Torwoodlee, Clifton, Stitchill, Greenknow, Buckholm, etc. Take this entry as an illustration of the times—John Logan, angry that a bond for which he was cautioner had been assigned to a Robert Logan, came to Pringill's "awne wreitting chalmer" on the 12th inst. at three in the afternoon, imperiously demanding if he had written the assignation, and how he durst do the same. Pringill answered with that respect that became one of his calling, telling him that he was in a public charge to serve all His Majesty's subjects. Logan then became abusive, calling the said Robert and his servants false knaves, vowing and swearing that he should eat them all and have their lives. With that he minted to his whinger, and would have attacked Pringill had he not been protected by others present. He was put out of the chamber and down the stair; when coming directly upon Robert Logan, who was standing at the stair foot, he would have assaulted him also with the drawn whinger had he not been stayed; on the 14th (June 1621) both parties compearing personally, the Lords find John Logan guilty, and commit him to ward in the Tolbooth.

In June 1625 Robert is at Milton, and writes the testament of his brother John, younger. In August 1629 Robert Porteous, for a certain sum of money, disposes to him for ever the whole kirklands of Pencaitland, with the old mansion of the same, barns, glebe adjacent, teind-sheaves, houses, and pertinents. In 1631 Robert has sasine of an annual rent of £1000 Scots furth of the barony of Salton. In 1633 he and his son John have sasine of certain acres in Newhaven, and the bailiary, but resign them shortly afterwards on being paid 5000 merks. In March 1634 Mr John Pringle and Joneta Byres his spouse, and John Pringill in Milton his uncle, have sasine of annual rents granted by Sir Robert Richardson, furth of his lands of Easter Pencaitland. On 29th May 1635, at Edinburgh, Sir George Cockburn of Ormiston, by contract, sells to Robert Pringill, W.S., and his son and heir apparent, Mr John, without reversion or regress, the lands of East and West Templehall, Huntlaw, and Dryburghland, as occupied by the late Mr Samuel and the late Francis Cockburn; also the lands of "Southwood alias Woodhead" and toft-houses, with the lands and acres called Parisflat and Vicarsfold pertaining of old to the Vicarage of Pencaitland, lately disposed by

Sir Robert Richardson of Easter Pencaitland to Sir George; with the manor-place of "Woodhead alias Southwood," houses, orchards, dovecot, coals, and coalheuchs, together with the teind-sheaves and other teinds great and small of all the above lands, and power to win limestone in the same quarries as Sir George's tenants wherever situated: sasine was taken in August following, Robert intimating that the lands were to be his son's in satisfaction of the 28,000 merks he had promised to give him on his marriage with Joneta Byres in 1633. In September 1635 Robert Pringill, W.S., has sasine of Nether Lugate and Meikle Hoprig, irredeemably and without reversion. In April 1645 Robert and his second son Robert, upon a precept granted by John Lord Borthwick, have sasine with actual possession of Dewar in the parish of Heriot, upon the resignation of James Pringill thereof. In August 1646 the King confirms to Robert Pringill of Templehalls, W.S., his heirs and assignees, the lands of Whitburgh and Blackhouse, possessed by William, James, and Thomas Borthwick, which William Earl Marischal resigned; also the lands of Bowshielhill, appraised by the said Robert in 1637, which Lady Lawson of Ednam resigned. In 1647 Robert and his son Mr John are amongst the Commissioners of War appointed by Parliament for Haddingtonshire. Robert died in August 1652, having had issue by his spouse Violet Cant of the Grange: (1) Mr John, his heir; (2) Robert, of Dewar, admitted a W.S. in 1655.

It should be remarked here that Robert Pringle who bought Stitchill, and who was collector of fines for the Treasurer at the justice courts held at Jedburgh and Dumfries, and resided for upwards of twenty-five years at Baitingbush in the Debateable Land as baillie to the Scotts of Buccleuch, is always erroneously referred to as a Writer to the Signet, in the belief apparently that he was one and the same person as his contemporary Robert Pringle of Woodhead, W.S.—an error which appears even in the List of the Society of Writers to the Signet, but which, on its being pointed out to them, we are informed, has now been corrected.

In August 1652 Master John Pringill, now of Woodhead, upon a charter granted by William Lord Cranston, has sasine of the lands of Cranstondean, Loanhead, Paistonburn, New Mains, and others, with the mills, lime quarries, coalheuchs, etc. In 1655 he is retoured heir of his father Robert in the lands of Whitburgh and Blackhouse. He died in 1659, and was buried on 18th January of that year in Greyfriars. He married, first, Joneta Byres in 1633; second, Margaret Dickson; third, Jonet Bruce, whose second husband was Edward Wallace of Shewalton. Mr John left, according to his testament, farm stock and plenishing worth £1573, and bonds granted or assigned worth £29,165, amongst the

debtors being the Master of Gray, Viscount Kingston, the Earl of Winton, Sir John Ruthven of Dunglass, and William Lord Cranston—a great Royalist, whose lands were saved from confiscation by Cromwell at the intercession of the King of Sweden. Mr John by Margaret Dickson had issue: (1) John, his heir; (2) David, born in 1645; and Susanna as youngest of the daughters; and by Joneta Bruce, a daughter Janet, born in May 1658.

Robert Pringle of Dewar, W.S., second son of Robert of Woodhead, W.S., after a somewhat inglorious career, was dead before November 1670, as was also his widow Margaret Ker, leaving no children.

John Pringle, now of Woodhead, retoured heir to his father Master John, and his curators, are successful in obtaining decreets for repayment by certain of the granters of the above bonds. In 1666 he is appointed a Commissioner of Excise for Haddingtonshire. "On 25th June 1674," says Wodrow in his *Sufferings of the Church of Scotland*, "I find another decret of the Council against the keepers of conventicles in the garner house of the laird of Stevenson . . . and in a house alleged to be made up on purpose for conventicles by Mr Robert Hodge, bailie of Lamington. The preachers at these places are . . . Pringle of Woodhead, for being at some of them, is fined in a fourth part of his yearly valued rent, and some others; and a good many of the meaner people are ordered to be denounced for non-compearance. I find John Pringle of Woodhead is liberated from prison on 16th July upon paying £277 Scots." In 1678 John is appointed a Commissioner of Supply for Haddingtonshire. A Privy Council paper of the date 13th September 1678 says: "Forasmuch as it is found by an assize that . . . (4 women), prisoners, are found guilty of the crime of witchcraft, and are decerned by us the Lords Commissioners of Justiciary to be taken to Paiston muir upon Friday next, the 20th day of this inst., between 2 and 4 in the afternoon, and there to be strangled at a stake till they be dead, and thereafter their bodies to be burned to ashes, these therefore require and command Sir Robert Hepburn of Keith and John Pringle of Woodhead to see the said sentence and doom put to execution as they shall be answerable." In June 1685 Parliament ratifies in favour of John Lauder of Fountainhall, merchant burghess of Edinburgh, and Sir John Lauder his eldest son, the charter granted to them by Charles II. on 13th August 1681, of all and hail the lands above mentioned possessed successively by Robert, Mr John, and John Pringle of Woodhead, and resigned by the said John: also parts of the barony of Cranstondean, viz. Paistonburn, New Mains, etc., resigned by the late Lord Cranston. In July 1690 in the action of Susanna Pringle and her second spouse Mr George Home against William Cleland, it was stated that he had granted her a bond for 3600 merks,

with 400 merks expenses, annual rents, and £20 penalty for each term of failure, on 13th July 1681, and she had assigned to him a bond for 5000 merks granted to her by her deceased brother german John Pringle of Woodhead, whereupon Cleland led adjudication of Woodhead, but she and he transacted with Sir John Lauder to take no action till nine years thereafter; in the meantime Cleland had paid to her during her widowhood and at her second marriage certain sums of money: after adjustment of accounts between the two, the Lords ordain Cleland to pay to Susanna £1786. John Pringle of Woodhead and his spouse Lillias Murray of Blackbarony had issue: (1) Alexander, born 1666; (2) Robert; (3) John; (4) —; and three daughters, Margaret, Mary, and Violet. After the sale of Woodhead John Pringle may have removed to his estate of Whitburgh and Blackhouse.

Now as to Fountainhall House. The reason why Sir John Lauder changed the name is evident. It would never have done for an advocate to be designed of Woodhead, or a Lord of Session to be called Lord Woodhead; the titles were too suggestive! It is believed that a strong spring near the house suggested the new name Fountainhall. As to the eastern wing, with its large upper room, the so-called "Lord Fountainhall's Reception-Room," it is evident that it was there long before his day. It was built by Mr John Pringle, and commemorates, according to an old custom, his marriage with Margaret Dickson, as the date 1638 and the monogram, consisting of their initials I. P. and M. D., above the dormer window show. This date with what seems to read "July 21st" occurs also on the south-east corner of the wing, and may indicate the day of the marriage. It also appears on two corresponding stones at the upper ends of the eastern wall, with the initials R. P., indicating Robert Pringle, Mr John's father. Whether the large upper room was also a garner room like the one at Stevenson, or not, it was certainly used in the same way in the next generation by John Pringle for holding conventicles.

SOUTRA.

A word as to Soutra and John Pringill, second son of William in Milton, and brother of Robert of Woodhead, W.S. In September 1635 he had sasine of the lands of Soutra, Soutrahill, Soutrabarns, and Redhall, on a charter granted to him and his heirs by the Provost, Bailies, and Deacons of Edinburgh; also, in March 1644, along with his second son Robert, of the town and lands of Blackshiels, on a charter granted by Earl Marischal, Lord Keith, irredeemably. John died in December 1650. By his spouse Agnes Henderson he had issue: (1) William, of Soutra; (2) Robert, of Blackshiels; (3) John, in Milton; (4) George; born respec-

tively in 1623, 1627, 1629, and 1632. In October 1652 William, as heir of his father, and of age, is granted sasine of the lands of Soutra, by deliverance of earth and stone thereof, on a precept from the Provost and Bailies of Edinburgh, "reserving to us the orchard of Soutra for holding our Courts," paying a yearly duty of £35. William was succeeded within a few years by his brother Robert of Blackshiels.

Nor was Robert a long liver. He died before Whitsuntide 1669, leaving the lands of Soutra and Blackshiels to his three daughters as heirs portioners: (1) Agnes, who married her second cousin David Pringle, brother of John of Woodhead; (2) Margaret, who married Lieut. Joseph Douglas of H.M.'s Lifeguards (Foot)—she died before March 1675, as also their son James Douglas, to whom his father became heir; (3) Catherine.

David Pringle and his spouse Agnes Pringle both died in 1686. They left an only child, Margaret, to whom, in the same year, James Pringle, as nearest of kin on the father's side, was retoured Tutor.

David and his relict Agnes were buried on their own lands in Soutra Aisle, that fragment of the famous monastery that once overlooked the Lothians; and on the lintel of the door in the north end can still be seen their initials and the date cut in bold characters, thus:—

16 D. P. A. P. 86

Visitors, as is usual at such shrines, have been busy scratching their initials in the soft sandstone, and one of them by an added stroke has altered the second P. on the lintel into an R.

In the opposite end of the Aisle is a slab, inserted in 1827, commemorating a "John Pringle of Beatman's Acre who died in 1777," who is credited in Carrick's *Newbattle Abbey* and Hunter's *Fala and Soutra* as a descendant, not of the Pringles of Soutra—as one would expect—but of a John Pringle, a shepherd, who had the good fortune to entertain, and regale with roast chicken for supper, the benighted king, James V., who next morning, by way of thanks, granted him the piece of land called Beadman's Acre—a myth given currency to in a late ballad beginning:—

"Hae ye no heard o' the guid auld times,
When Pringle was sae luckie
To get a lump o' Soutra hill
Just for a roasted chuckie?"

Indeed the two above-mentioned historians of the district seem to have known nothing of the Pringles, lairds of Soutra and Fala for half a century.

That Soutra Aisle should have escaped the hands of the despoiler during all these years, is no doubt due to its conversion into a burial-place.

V.

THE RELATION OF THE FORT AT NEWSTEAD TO SCOTTISH HISTORY, A.D. 80-180. BY IAN A. RICHMOND, CORPUS CHRISTI COLLEGE, OXFORD.

Since 1911, when Mr James Curle published his remarkable discoveries in the Roman fort at Newstead,¹ Roman archaeology in Scotland has moved forward apace. It is true that exploration has been confined chiefly to the Wall of Pius and to Traprain Law; but forts further north have been dealt with afresh² by Dr G. Macdonald, who in 1920 discussed the results gained at Inchtuthil, Ardoch, and Camelon, and brought them tentatively into connection with certain facts in northern England. At that time, however, it was impossible to include the results gained at Newstead without complicating and involving the issues, for the new theory needed the simplest possible statement. The first part of this paper will discuss the results gained from Newstead as they appear in the light of more recent research. The second and third parts will attempt to compare further the earlier results with other evidence, and to estimate their bearing upon the history of Roman Scotland. At this point, however, I wish to acknowledge gratefully the help and encouragement given to me by Dr G. Macdonald and Mr R. G. Collingwood, and, more especially, by Mr James Curle, although I hold myself responsible for the conclusions drawn below.

1. PERIODS OF OCCUPATION AT NEWSTEAD AND THEIR INTERPRETATION.

In 1911 the excavators at Newstead felt able to distinguish five periods, divided between a late and an early occupation of the site. The discovery was made possible by tracing roads and buildings in which definite changes were recorded. But it is important to note that the only building within the fort thoroughly cleared was the *prætorium*;³ elsewhere the floors were noted merely as they occurred in trenches. For this reason it is impossible to judge from the amount of late or early pottery found at Newstead the relative intensity of occupation of the buildings. The coin list, on the other hand, is a rather safer guide, since each coin is minutely described by Dr G. Macdonald in an appendix to the book on Newstead, and therefore is a valuable indication for dating.

¹ *A Roman Frontier-Post and its People; the Fort at Newstead, near Melrose.* By James Curle. Referred to *passim* as "*Newstead*."

² "The Agricola Occupation of North Britain," *J.R.S.*, vol. ix.

³ *Newstead*, p. 42.

Guided partly by these results and partly by scanty historical records, the excavators came to the following conclusions. The early occupation dated from Agricola's conquests about A.D. 80 until the close of Trajan's reign, about A.D. 115-7. In it were discerned at least two periods. The first included the building and the evacuation of a fort 11·7 acres in size; the two latest coins¹ found in its ditches dated to A.D. 86 and were nearly in mint condition. The second period seemed to continue to the close of Trajan's reign, and at all events fairly fresh coins of Trajan Cos. V. appeared to show that both the fort and its bath-house were occupied then.² It included the erection of a 15-acre fort, surrounded by a huge ditch and by an earthen rampart; the four gates were protected by curved ditches (*claviculae*), and it appeared that at least the main buildings, which faced west, were built in stone.

The late occupation dated from the advance of Urbicus in A.D. 140-2 until about A.D. 180, and to it were assigned three periods, not without doubt about the first. It seemed to begin with the building of a stone wall all round the 15-acre fort, in such a position that the great ditch, although still receiving drainage at the south-west corner, could not have remained open to full size.³ Now, if not before, two more ditches were made to surround the fort; the *claviculae* of the earth-fort were filled up; all buildings of importance, including barracks, were made of stone. These events belong certainly to one period. Soon, however, the fort was reduced in size and its main buildings were made to face east instead of west. Later still—the excavators suggested A.D. 155-8—the final late period began. The fort was thrown open to full size and its buildings were refurbished. Noteworthy was the addition at this time of a long hall to the *praetorium*.⁴ The fort then was held for some time and abandoned about A.D. 180 with the rest of Scotland. Coins made quite clear this final date.

How do these results, briefly summarised, agree with interpretations of facts gained on other Scottish sites? At first sight satisfactorily, at least so far as the late periods are concerned. On the Wall of Pius at Rough Castle, Castlecary, Balnuldry, and now at Old Kilpatrick, three periods of occupation certainly belong to Antonine times.⁵ The opening of the second period has been assigned with good reason to about A.D. 158.⁶ The third period is characterised by hasty and slipshod repairs, and did not last for very long. Dr G. Macdonald, noting the character of the work and the fact that no third period occurs at Birrens, in

¹ Coins numbered 163 and 170, *Newstead*, pp. 405, 406.

² *E.g.* Coins 74, 77, 78, p. 394.

³ This is shown by Sections II., VII., VIII., *Newstead*, p. 30.

⁴ *Newstead*, pp. 43, 44, Pl. ix. 1.

⁵ See *Roman Wall in Scotland*, pp. 396, 397; *The Roman Fort at Balnuldry*, p. 104.

Dumfriesshire, has suggested that just before A.D. 180 the Wall was lost and regained temporarily.

These interpretations, however, have not yet been applied to the results at Newstead. But supposing the three periods assigned to the Antonine occupation to be identical with those on the Wall of Pius, I find it difficult to believe that Verus built the reduced fort. All the buildings of this fort were new; yet elsewhere, especially in Scotland,¹ it was the habit of Verus to rebuild old buildings upon old lines, since, though destroyed, they had only been deserted for a year or two. It is unexpected, moreover, to find him reducing a fort in size just after a dangerous frontier war. On the other hand, if the final work at Newstead is thought to be contemporary with that on the Wall of Pius, it differs a good deal in character: at Newstead repairs were passably executed and even involved some new building, including a large hall at the *prætorium*; on the Wall they were temporary, slipshod, and makeshift. Indeed this work at Newstead resembles much more closely the work of Verus at Birrens or at Balmuildy, although, if it is assigned to Verus, the reduced fort would have to belong to Urbicus, or to unknown changes falling between him and Verus of which there is little likelihood. Another solution could assign the final reconstruction at Newstead to A.D. 169, when literary tradition,² but no Scottish archaeological evidence yet to hand, mentions that a war was pending in Britain; but here again the incongruity of the reduced fort with work done by Verus elsewhere has to be explained away.

Enough has been noted now to show that the interpretation of 1911 is beset with puzzles. But another solution remains to be mentioned. It is possible to throw back the 15-acre fort to the Flavian-Trajanic period, and, giving the last repairs to Verus, as at Birrens, to believe that the reduced fort was built by Urbicus in A.D. 140-2. The later history of Newstead after A.D. 158 then would resemble that of Birrens, which may have been built rather before A.D. 140-2,³ and was only reconstructed once. Evidence from Lyne, near Peebles, unfortunately is not so clear, but few signs of reconstruction were noted.

So much for facts external to Newstead and their suggestions. Certain evidence from within the fort seems to point in the same direction. A general consideration raises the question why the reduced fort, which belongs to the fourth period, was placed in the eastern half of the 15-acre fort. This involved not merely the construction of three new gates instead of one, but also at least the complete re-

¹ Haverfield, *Proc. Soc. Ant. Scot.*, vol. xxxviii.

² Capitolinus, *Vita M. Ant. Phil.*, 22; also *Arch. Æl.*, 3, vol. viii. p. 217.

³ G. Macdonald, *Trans. Dumfries. Ant. Soc.*, 1920-1.

building of the *prætorium*; it also included the building of new granaries. But, if the reduction was decided upon just after A.D. 155-8, it would have been much simpler and much more normal to use existing and little damaged gates and buildings and to erect an eastern cross-wall, that is, to rebuild the fort as much upon old lines as possible, as Iulius Verus did elsewhere. Also this position would have avoided the building of a new main road outside the fort. On the other hand if, as I suggest, the reduced fort was the work of Urbicus, and his troops were reoccupying the mere shell of a fort deserted for a score of years, all kinds of reasons, including dry ground, not powerful enough in the former case to outweigh the advantages mentioned, then may have dictated that it was better to build in the eastern end of Trajan's old fort. This appears to suggest that some question of this sort really faced Urbicus rather than Verus.

More detailed evidence points the same way. When the first stone fort-wall was built at Newstead in Period III., the *claviculae* which had guarded the gates of the old earth-fort of Period II. were filled up and roads were laid down across them. These ditches did not contain much pottery, and although all the pieces found were of essentially first-century type, Dragendorff has noted¹ that they do not necessarily prove that the ditches were filled up at the end of the first century. Dragendorff, however, did not visualise a Trajanic occupation. Actually had these ditches been open and in use during most of Trajan's reign we should have expected them to yield rather later pottery. While Dragendorff's implication, that the ditches might have been filled up at the beginning of an Antonine occupation and still produce purely first-century pottery, would hold only if the occupation of the site ceased about A.D. 100. Coins prove that this did not happen.²

The solution of another puzzle again gives a similar result. With the *prætorium* of the reduced fort (that is, of the fourth period) are contemporary the granaries on either side of it, for their orientation and level are the same. But beneath the southern granary was found an early building of stone of which the alignment belongs to Period II., like that of the walls marked I. beneath the Antonine *prætorium*, which are discussed below. Then, since no building or floor lay between this building and the granary of Period IV., we have to suppose either that the granary goes back to Period III., which is disproved at once by level and orientation, or that the building of Period II. also was used in Period III.; otherwise there must have been in Period III. an empty space just where the buildings of a Roman fort were most substantial and most crowded. But if a

¹ Dragendorff, *J.R.S.*, vol. I. p. 135.

² See note 2 on p. 310.

long interval of more than twenty years separated Period II. from Period III., the building must have been rebuilt in order to be used in the two periods. Since it was not reconstructed, it seems only reasonable to suppose that Periods II. and III. followed one another closely. But Period II. is certainly pre-Hadrianic. Therefore the same result occurs as before. Period III. is Trajanic and Period IV. falls to Urbicus.

If these deductions are correct, then the 15-acre fort, with its buildings and wall of stone, goes back at least to the reign of Trajan. It will be necessary, however, to consider the objection that stone fort-walls did not come into general use in north-western Europe until after Hadrian's reign. This seems an admirable generalisation when there is evidence to support it in each special case considered. But there are special cases which contradict it, of which not all can be said to have been governed by a lack of wood or an abundance of stone to hand for building material. Unless the sculptors of Trajan's column allowed prophetic imagination to guide their work, they have shown that plenty of forts provided with stone walls and stone buildings existed before A.D. 106 in the wide forest-lands of Dacia.¹

Even in Britain the fort at Hardknot,² abandoned in A.D. 122-5, has walls of stone; Gellygaer,³ a Trajanic fort, is more than half-way in evolution between earthen rampart and stone wall; at Papcastle,⁴ as Mr R. G. Collingwood tells me, an early stone fort-wall is associated with Samian shape 30 and other Domitian-Trajan pottery, together with a slightly worn *denarius* of Galba. Thus Newstead quite well may be regarded as an early instance of a stone fort placed in a very important advanced position. As such it would be in advance of its time; in its position wood and stone were plentiful.

From the point of view of the earlier periods the assignment of the first stone-walled fort to before A.D. 115-7 is satisfactory. It brings Newstead into line with facts elsewhere in the north and, as will appear, in the south. In 1920, Dr G. Macdonald pointed out⁵ that there was evidence for three pre-Hadrianic periods at three Scottish forts to the north of Newstead. His proofs of the statement have been accepted widely as facts, and, taken as a whole, seem indisputable. At present it does not seem a valid objection to point to the scantiness of Flavian-Trajanic pottery in Scotland as compared with Antonine pottery. Such observations only emphasise the fact that no pre-Hadrianic fort in Scotland yet has been excavated thoroughly.

¹ *E.g.* Cichorius, vol. II. Pls. xvii., ciii., xciii., cxvi.

² *Cumberland and Westmorland A. and A. Soc. Trans.*, N.S., vol. xxi. p. 41.

³ *Roman Fort at Gellygaer*, J. Ward.

⁴ *C. and W.A.S., Trans.*, N.S. vol. xlii. p. 139.

⁵ See note 2 on p. 309.

Nor is the suggestion, first made by Dragendorff,¹ convincing that such sites should produce East Gaulish Samian ware. Further south thoroughly explored forts like Slack, Castleshaw inner fort, and Hard-knot have produced only two decorated pieces of this pottery between them.² All these sites were occupied until A.D. 122-5, when Scotland had been abandoned almost for a decade, and northern Britain clearly was not yet receiving abundant supplies of pottery from Gallia Belgica, or from the Germanies.³

But, if the first stone fort at Newstead belonged to Trajan, when was the earth-fort abandoned? Evidence shows only that this did not happen before about A.D. 97, and for more definite information, which suggests a date soon after A.D. 100, it is necessary to look elsewhere than Newstead. At Newstead, however, a *denarius*⁴ of Domitian, dated to A.D. 92-3, and not quite in mint condition, was found on the surface of the road contemporary with the *clavicula* outside the early south gate, and covered by the road which crossed the *clavicula*, and was abandoned when the reduced fort was built. This proves that the road of the third period was not constructed until after about A.D. 97, when I suggest the coin was dropped.

Outside the fort the bath-house raises problems of its own. Here foundations had been robbed so thoroughly that it was impossible even at the time of excavation to make much of periods of alteration.⁵ But it seems that the "nucleus" building was constructed in precisely the same way as the walls beneath the Antonine *prætorium* marked I,⁶ which orientation and level show to belong to the earth-fort II.; the materials used were exactly similar. This seems good foundation for the belief that the buildings were erected at the same time, and it gives a starting-point. In this early bath-house the floors of room B and of the *caldarium* (E) were renewed once.⁷ There followed changes which the plan shows to have involved at least two reconstructions of the building; thus there were no less than four periods in the bath-house. Their date is not quite so certain, and it seems advisable to remember that at Gellygaer the bath-house was reconstructed at least twice, although no alterations took place within the fort.

But if the inference drawn from building materials is right, the "nucleus" bath-house at Newstead, the earliest building on the site

¹ *J.R.S.*, vol. i. p. 135.

² *Yorks. Arch. Soc.*, vol. xvi. p. 46; *Castleshaw*, 2nd *Interim Report*, pp. 51, 52; *C.W.A.S. Trans.*, N.S., vol. xxi. pp. 31-2.

³ See S. N. Miller, *Scott. Hist. Rev.*, xviii.; but I arrived at the conclusion independently.

⁴ Coin numbered 61, *Newstead*, p. 392.

⁵ *E.g.* Flavian-Trajan remains were found beneath the rampart round the building; a fresh coin of A.D. 89 (No. 59, p. 392) was found above its foundation.

⁶ *Newstead*, p. 52.

⁷ *Ibid.*, p. 94, Pl. xiii. 1, p. 96.

where it stood, was not built until A.D. 86-90, and was contemporary with the 15-acre earth-fort. This seems probable. The late Mr G. L. Cheesman noted¹ that Agricola's fort at Newstead, 11·7 acres in size, was not permanent, but belonged to a type used in Germany for winter-quarters. In that event a bath-house well may not have existed until A.D. 86-90, when a more permanent fort, held year in, year out, was erected at Newstead; just as at Balmuildy² the bath-house outside the fort does not seem to have existed in the earliest days of occupation. The alterations in the floors of this building at Newstead then might be assigned, with caution, to the third early period.

The next alterations, even if their number is uncertain, belong to a new building at a higher level, of which the plan was new and embodied fewer apses. In the north-east corner may be discerned walls which hardly can have stood together.³ Also room J had two floors. Those walls which jut very far out, however, seem later, or earlier, than the inner walls. They encroach upon the rampart which was made to surround the bath-house but which later was demolished. A mystery surrounds the exact period of this unique fence. Pit LVII. was dug beneath its foundations and is of Flavian-Trajanic date, as its contents show.⁴ Mr Curle tells me also that Antonine pottery was found beneath it. But evidently the whole site was much disturbed, for a coin of Domitian, dated to A.D. 89 and in good condition, was found above the cobble foundation.⁵ Clearly, therefore, no more definite conclusion is warranted about the date of the rampart than that it was later than Trajan's reign; to assign it to a definite period in the Antonine occupation seems rash. At some time within the Antonine period, however, the baths were included by an annexe ditch.⁶

At the *prætorium* evidence is more definite. In the final period of the late occupation this building received a new colonnade and new floors within its western range of rooms. In the *sacellum* was placed an underground strong-room, first typical under Marcus. At the front of the building was erected a great hall whose purpose is not quite clear. In Germany the same thing is called habitually an *Exercier-Halle*; at Newstead it was set up during the enlargement of the fort for cavalry; perhaps one may guess that something like it is referred to⁷ as *basilica* on a Lancaster inscription, and as *basilica equestris exercitatoria* on

¹ *Auxilia of the Roman Imperial Army*, p. 106; *Newstead*, p. 25.

² Miller, *Balmuildy*, pp. 53, 104.

³ *Newstead*, p. 95.

⁴ *Ibid.*, p. 129; Oswald and Pryce, *Terra Sigillata*, p. 58.

⁵ See note 5 on p. 314.

⁶ The ditch produced Samian ware of Cinnamus and Divixtus, a *denarius* of Hadrian and a second brass of Faustina I., the last found in filling near the surface; this suggests the Urbican period.

⁷ *C.I.L.*, vol. vii. Nos. 287, 965.

another stone, from Netherby. Apart from this addition, however, the Antonine building was a large *prætorium* of fairly simple type, with two courtyards.

Earlier *prætoria* are less sharply defined. But beneath the Antonine courtyard were observed two levels,¹ the first containing a small square room, whose north, south, and east sides rested upon cobbles, and the west upon hard gravel; the second is thus represented by the cobbles and the gravel. Beneath the wall which separated the Antonine courtyards two levels also were noted,² first a clay floor, and then a *stratum* of gravel one foot thick. This accounts for two buildings of early date. But the suggestion that the lower level of gravel represented Agricolan streets or an Agricolan building will not suit the position of the gates of the Agricolan fort. Rather, then, this level represents a courtyard contemporary with the walls marked I., which are aligned to the rampart of the earth-fort II., and to the building which lies beneath the Antonine south granary. The foundations of pillars found two feet below the Antonine inner courtyard, and the building on site XVII. found five feet below the surface, may belong to the Agricolan age. But if the pillars are so early in date they represent a building of stone. Thus certain traces of Agricola's *prætorium* still are to seek.

It seems probable, therefore, that at least three *prætoria* lie below that contemporary with the reduced fort. The most prominent is that belonging to the 15-acre earth-fort of Period II., represented by the walls marked I. This may have been used also in the 15-acre stone fort of Period III., but the small square room "2" is at a slightly higher level, and so is the clay floor, and they seem to belong to that period. The building contemporary with the walls marked I., as its orientation shows, seems also to have been used in the third period without doubt. Later, the Antonine south granary was built above it.

The conclusions which the discussion has reached now may be collected and set forth in summarised form, telling briefly the history and evolution of the fort as it appears to me.

(1) *Period I.*, A.D. 80-86—A.D. 90.

In A.D. 80, Agricola advanced northwards and soon founded a large fort on the south bank of the Tweed. It was 11·7 acres in size and belonged to a common Flavian type, indicated by the late Mr G. L. Cheesman.³ Perhaps it was not intended that the fort should last very long, since the frontier in the north still was unfixed. But the position was strong and the fort was defended by an earthen rampart, double

¹ *Newstead*, p. 47.

² *Ibid.*, p. 51.

³ See note 1 on p. 315.

ditches, and *claviculae*. Nothing is known for certain about its internal buildings. Whether a bath-house was built now is unknown.

(2) *Period II.*, A.D. 86-90—about A.D. 100.

In A.D. 86-90 Agricola's site was occupied by a larger *castellum*, fifteen acres in size, and surrounded by a huge earthen rampart, built with upcast from a deep ditch. At the gates were *claviculae*. Internal main buildings were of stone; one of them may be recognised beneath the Antonine south granary; part of the *prætorium* may be identified with the walls marked I. on the plan of the Antonine HQ. building. Similar in construction was the "nucleus" bath-house.

(3) *Period III.*, about A.D. 100—A.D. 115-7.

Evidence at Newstead seems to show that this period opened after about A.D. 97; analogies given below strongly suggest a date soon after A.D. 100. The place of the earthen rampart was taken by a stone wall, set at a slightly different angle. The *claviculae* of Period II. now were filled up, and their place was taken either in this or in the next period by two outer ditches. If these ditches were dug now, their upcast may have helped to fill up the great ditch until it reached smaller dimensions; that it still remained open is proved by the fact that a drain from beneath the stone wall discharged into it at the south-western corner of the fort; that it was partly closed has been noted above. Inside the fort either parts of a new *prætorium* or additions to the old one may be recognised in the little room and clay floor below the Antonine courtyard. Orientation suggests that the stone barracks on site II. belong to this time rather than to an earlier period. New roads were laid out and new gateways built. Alterations seem to have taken place in the *caldarium* of the bath-house (E), and in room B.

(4) *Period IV.*, A.D. 140-2—A.D. 155.

When the troops of Lollius Urbicus marched northwards about A.D. 142 they found the shell of a Trajanic stone fort still standing, doubtless in comparatively fair preservation. From it they cut off a suitable space and built at its eastern end a 10-acre fort. The main buildings, erected afresh, now faced eastwards instead of westwards, and where had been the earlier *retentura* stood the *prætentura*. A new cross-wall, but no ditches, fronted the west side of the fort, built less wide than the Trajanic wall. The bath-house, now quite isolated, was reconstructed, and perhaps was enclosed by an earthen rampart.

(5) *Period V.*, A.D. 158—about A.D. 180.

In A.D. 155-8 the fort seems to have been evacuated with the rest of Scotland for the duration of the Brigantian War. Under Iulius Verus it was reconstructed in order to hold cavalry, just as most Scottish forts received new garrisons¹; the whole fifteen acres was occupied once more. The cross-wall of Urbicus was demolished; the *prætorium* received new floors and an underground strong-room; a large hall and stables were newly erected, and the old western fort-wall of Period III. was refurbished. At the bath-house the rampart perhaps was razed now and the building may have been repaired and enlarged. About A.D. 180 the whole site was abandoned by Rome for ever.

2. SITES SOUTH OF NEWSTEAD, A.D. 80-117.

Northern England has not been very fortunate in the excavation of sites occupied under the Flavian Emperors and Trajan; several have been attacked with the spade, but most are covered with later Roman buildings, and these have received more attention. Yet there are some notable exceptions. In the West Riding of Yorkshire should be mentioned the forts at Slack and at Castleshaw, abandoned in A.D. 122-5. Further north are Ambleside, Hardknot, and Papcastle, in Cumberland, all excavated sites. Last of all may be mentioned Corbridge, where magnificent remains of the Antonine period have tended to eclipse important earlier discoveries.

Instead of unbroken and uneventful occupation, all these sites reveal traces of change. The early forts at Ambleside and at Castleshaw were not held for long, and it is suggested² that both were founded by Agricola and abandoned at least soon after his recall. Roughly, therefore, their history corresponds³ with that of Agricola's fort at Newstead and legionary *hiberna* at Inchtuthil. All were abandoned by the years A.D. 86-90. Elsewhere, however, there is evidence of later changes. At Hardknot⁴ there were three floors in the commandant's house and in the east corner-tower; in the tower the two lower floors at least were covered by a tell-tale layer of burnt matter. At Slack, pottery suggests that the granaries of stone were not built until about A.D. 100; and with their erection are associated alterations in the bath-house and the building of the second small fort at Castleshaw, as stamped tiles show.⁵ At

¹ Macdonald, *Roman Wall in Scotland*, p. 354.

² Tolson Memorial Museum, Huddersfield, *Handbook IV.*; *C.W.A.S. Trans.*, N.S., vol. xxi, p. 6.

³ See note 2 on p. 310; *J.R.S.*, vol. ix, p. 115.

⁴ *C.W.A.S. Trans.*, O.S., vol. xii., "tower," pp. 421-2; "house," p. 423.

⁵ Tolson Memorial Museum, Huddersfield, *Handbook IV.*

Papcastle¹ a stone fort-wall—hardly to be considered Agricolan—was found amid Domitian-Trajanic associations, as mentioned above in connection with stone walls.

Still more definite is the evidence at Corbridge, which needs explanation in more detail. On site VIII., sealed by the Stanegate of A.D. 120–40, were found three levels, all quite certainly pre-Hadrianic in origin.² The uppermost contained well-built walls of ashlar masonry; the middle consisted of mixed earth, 20 inches thick; the lowest contained wooden post-holes, driven into virgin soil, found in association with Samian shapes 29, 30, 27, and 18, and therefore of Agricolan date. Here, therefore, as the late Professor Haverfield noted,³ is an important indication of pre-Hadrianic periods. Further towards the north-east, if the two long ditches, running roughly from north to south,⁴ and the curved ditches⁵ with a gateway and *clavicula*, which face north, belong to the same system of defence, rules of castrametation are violated wholesale. But both sets of ditches belong to the first century, as the objects found in them show. At present they cannot be explained certainly, since they are too isolated; but the suggestion⁵ seems probable that the eastern set belong to the north-eastern corner of a fort. Within the area of the supposed fort was found an important coin-hoard, amid abundant traces of fire. The latest coin,⁶ in mint condition, dated to A.D. 98, and Dr H. H. Craster dated the deposit to A.D. 99–100. The hoard may be taken as certainly indicative of serious trouble at that date, but what buildings were involved will not be wholly clear until work begins once more at Corbridge, an event long overdue.

Thus, such facts as excavation has brought to light in northern England agree well with what has been provisionally deduced in Scotland. It is very gratifying also to find the most precise evidence upon Dere Street, which connected the two countries, and it seems fair to assume now that the course of events was much the same both beyond and behind the Cheviots. In England, however, the evidence for dating is rather more clear. It seems plain that before A.D. 115–7 there were two changes in Agricola's fort-system, the first in A.D. 86–90, and the second, heralded by disaster at Hardknot and at Corbridge, after A.D. 100. After A.D. 100 also, as an inscription and excavations show,⁷ there was activity in Wales at Gellygaer and at Castell Collen. While two more inscriptions,⁸ at York of A.D. 108–9, and at Lancaster

¹ See note 4 on p. 313.

² *Ibid.*, vi. p. 207.

³ *Ibid.*, xii. pp. 232–4.

⁴ *Eph. Epigr.*, vol. ix. Nos. 1031, 1032; *Cymmrodorion Soc.*, 1908–9, pp. 95–7; *Arch. Camb.* 6, vol. xiv. pp. 15, 41; coin numbered 6.

⁵ *C.I.L.*, vol. vii. No. 241; *Eph. Epigr.*, vol. vii. No. 943.

⁶ *Arch. Æl.* 3, vol. vi. pp. 76–7 and 214–5.

⁷ *Ibid.*, vii. p. 167.

⁸ *Ibid.*, p. 250.

of Trajan's reign, point in the same direction. It would be wrong to insist upon precise parallelism of events, but there seems to be a strong case for a wholesale consolidation of Agricola's frontier early in Trajan's reign, preceded by trouble in the north, and continuing at least until A.D. 108.

3. HISTORICAL CONCLUSIONS.

The suggestion that the Scottish forts were repaired or rebuilt at this time, therefore, fits the archaeological evidence well. From a historical or strategical point of view it is still more convincing. It has been a constant and reasonable complaint that Britain figures little in history from Domitian to Hadrian. But by using such facts as we possess I venture to think it possible to begin construction of an outline. If Tacitus wrote truly and Agricola left behind him in A.D. 85-6 a province free from revolt and attack, then the reconstruction of A.D. 86-90 which appears at Newstead and elsewhere in Scotland, surely at Inchtuthil, Ardoch, and Camelon, is to be connected not with Agricola's recall, but with the withdrawal of *Legio II. Adiutrix* in A.D. 86-8.¹ If the evidence from Ambleside and Castleshaw has been read correctly,² the policy then adopted was to throw all the troops available into Caledonia and, having consolidated existing northern forts, to stand firm until the borrowed legion returned. It was hoped, I imagine, that the northward advance then would be completed. Meanwhile, Agricola had cowed the natives further south sufficiently to prevent revolt from breaking asunder a rather slightly fortified chain of roads.

The *pronunciamento* of the German armies in A.D. 88-9 changed the situation profoundly. After this, even if events had allowed it, Domitian was mistrustful and unwilling to increase any provincial governor's army. The execution of the governor of Britain, Sallustius Lucullus,³ for over-attention to military affairs points the moral. When Domitian passed away, in A.D. 96, affairs in Central Europe had become much too serious to allow any return of troops to Britain. It seems allowable, therefore, to guess that some four years later it was clear that in the north the British army held the Caledonian wolf by the ears. And the burnt layers at Corbridge and at Hardknot suggest that in or before A.D. 100 the army lost control.

Just about this time, in A.D. 102-3, Trajan sent out to Britain one of his first legates, the capable and distinguished L. Neratius Marcellus,⁴

¹ Furneaux and Anderson, *Agricola*, p. lxxv., note 1.

² *C.W.A.S. Trans.*, N.S., vol. xxi. Tolson Memorial Museum, Huddersfield, *Handbook IV*.

³ Suetonius, *Vita Domitiani*, cap. x.

⁴ *Prosopographia Imp. Romani*, vol. ii. No. 43; *C.I.L.*, vol. vii. No. 1193; the same name also fits the gap in *C.I.L.*, vol. vii. No. 1194.

whom even Domitian had trusted and advanced in the civil service. To him would fall the work of consolidating Agricola's frontier, now that the idea of advancing northwards had been abandoned. Not much yet is known about the extent of the consolidation, and it well may be the successor to Marcellus whose work can be traced at York in A.D. 108-9. But there is enough evidence to prove that reconstructions took place early in Trajan's reign at Castleshaw, Slack, Corbridge, and Hardknot; pottery, but not excavation, suggests that now the forts¹ at Manchester and Nether Denton awoke also to a new life. This brings Trajan's work to light once more in northern England; and it seems reasonable to assign to the same time a consolidation in permanent guise of forts in Scotland, in view of the close connection between Newstead and Corbridge.

Not much light is thrown on events between this time and A.D. 115-7, when the Romans were driven out of Scotland amid serious troubles. But before A.D. 114 it was found possible to extend the *census*² in the Peak District, since the *censitor*, Titus Haterius Nepos, was transferred thence to Armenia Maior, a province which existed only in A.D. 114-7. This seems to indicate that there was peace in the south.

Hadrian, beset with troubles during the first few years of his reign, endorsed Trajan's policy not to advance further north in Britain, and marked his decision by building in A.D. 122-5 his great Wall between Solway and Tyne. But the new frontier did not remove the danger of massed raids from the north, and it was still worth while to experiment in methods of barring out the Highlanders. The Antonine frontier was a new method, and Professor Haverfield's description of it as a breakwater shows the difference between it and the lines of penetration which Agricola laid down. For a few years, indeed, between A.D. 140 and A.D. 180, it looked as if the *limes imperii* might find a resting-place facing the Campsie Fells. But under the Emperor Commodus the decision was made which only the great Emperor Septimius Severus seriously attempted to revoke. After about A.D. 180 there was no permanent Roman advance beyond Redesdale and the Solway. The British army had been unable to face unmoved a crisis in the north since Domitian had reduced it to three legions.

¹ *R. Manchester*, pp. 95-6; *Archæologia*, vol. lxiv, p. 303.

² *C.I.L.*, vol. xi, No. 5213.

MONDAY, 12th May 1924.

GEORGE MACDONALD, C.B., F.B.A., D.LITT., LL.D.,
in the Chair.

A Ballot having been taken, the following were elected Fellows:—



Fig. 1. Stone Axe from Airngarth Hill,
near Linlithgow.

RONALD S. H. COLT of Gartsherrie and
Northfield, B.A. (Oxon.), Northfield
House, St Abbs, Berwickshire.

GEORGE E. EADES, M.A., L.C.P., 49 St
Margaret's Road, London, S.E. 4.

WILLIAM BARR KNOX, Redheugh, Kil-
birnie, Ayrshire.

WALTER G. NAPIER, M.A., B.Sc., 5
Sciennes Gardens.

There were exhibited by H. M. Cadell, F.S.A.Scot., a Food-vessel Urn found in a short cist at Cowdenhill, Bo'ness, in 1905, a polished Stone Axe found near a cist at Bridgeness (see previous communication by J. Graham Callander, F.S.A.Scot.), and a stone Axe, $7\frac{3}{8}$ inches in length, $3\frac{1}{8}$ inches in breadth, and $1\frac{1}{8}$ inch in thickness, of irregular form, the butt end, which is slightly imperfect, being pointed, and the cutting edge showing a slight ogee curve. The axe, which is polished over the whole of the surface, except in three small hollows, the bottoms of which have not been reached by the polishing-stone, was found 2 feet below the surface, on Airngarth Hill, near Linlithgow (fig. 1). The urn was subsequently presented to the Museum by Mr Cadell.

The following Donations to the Museum were intimated and thanks voted to the Donors:—

- (1) By CHARLES H. TURNBULL, S.S.C., 13 Rutland Square.

Stone Axe, $7\frac{1}{16}$ inches by 3 inches by $1\frac{9}{16}$ inch, found at Arisdale, Burravoe, Yell, Shetland.

- (2) By Miss MOFFAT, North Merchiston Lodge, Ardmillan Terrace.
Communion Token of Crailing, 1699.

- (3) By the Executors of the late JAMES LESLIE, C.E., through Sir JOHN R. FINDLAY, K.B.E., LL.D., F.S.A.Scot.

Flanged Bronze Axe, $4\frac{7}{16}$ inches long, $2\frac{7}{16}$ inches broad at cutting edge, locality unknown.

- (4) By Sir JOHN R. FINDLAY, K.B.E., LL.D., F.S.A.Scot.

Roughly chipped Scraper of bluish flint, $1\frac{5}{8}$ inch by $1\frac{5}{8}$ inch, from a kitchen midden at Woolworth, North Tasmania.

- (5) By Professor W. T. GORDON, King's College, University of London.

Side Scraper of flint, $1\frac{3}{16}$ inch by 1 inch, found at upper end of Long Row, Arthur's Seat, Edinburgh.

- (6) By Miss ROLLO, 15 Albany Street.

Two wooden Boxes, ornamented on the exterior with designs worked in coloured straws, said to have been made by French prisoners in Edinburgh Castle during the Napoleonic Wars.

- (7) By Mr ROBERT HANNAH, late of Barend Farm, Parton.
Old wooden Collection Ladle used in Parton Church.

- (8) By Mr JAMES BEVERIDGE, M.A., Rector of Linlithgow Academy.

Stone Button Mould of quadrate form, 3 inches by $2\frac{7}{8}$ inches by $1\frac{3}{8}$ inch, with a matrix for casting a button on one face, found to the south of Linlithgow in a field lying to the south of the High Church Manse property and Happercaigs Road.

The following Donations to the Library were announced and thanks voted to the Donors:—

(1) By DAVID MURRAY, LL.D., F.S.A.Scot.

Early Burgh Organisation in Scotland, as illustrated in the History of Glasgow and of some Neighbouring Burghs. Vol. i.

(2) By Le Comte BEGOUEN, the Author.

Les Modelages en Argile de la Caverne de Montespan (Haute-Garonne).

(3) Bequeathed by the late Miss ALEXA W. FERGUSON, 1 Lennox Street.

A number of Documents, including a Papal Bull concerning Tithes at North Berwick, dated 27th November 1369, and another dated 12th July 1492.

(4) By the Rev. R. S. G. ANDERSON, B.D., F.S.A.Scot.

Copy of the Covenants and the "Secession Bond suiting it for the times," the last mentioned signed by members of various congregations within the Associated Presbyteries of Perth and Dunfermline on 25th July 1745 and other dates.

It was intimated that the following purchases had been made for the Museum:—

Sporran, with leather purse, and brass clasp decorated on the front with large dot and circle ornament.

Brass Candle-box (Dutch), which belonged to the Steuarts of Coltness.

The purchase of the following Books for the Library was announced:—

The Archaeology of the Cambridge Region. By Cyril Fox, Ph.D., F.S.A.

Place Names, Highlands and Islands of Scotland. By Alexander MacBain, M.A., LL.D., with notes and a Foreword by William J. Watson, M.A., LL.D.

Die Bronzezeit in Oberbayern. By Dr Julius Naue. With Album.

The following Communications were read:—

I.

ROMAN COINS FOUND IN SCOTLAND. II. By GEORGE
MACDONALD, C.B., F.B.A., D.LITT., LL.D., F.S.A.Scot.

Six years have now elapsed since I endeavoured to bring together all the information I could collect as to the Roman coins that had been found in Scotland.¹ In the interval a certain amount of new material has accumulated, partly through fresh discoveries, partly through the emergence of hitherto unnoticed entries in old records. Nothing that has come to light weakens in any respect the general conclusions which I ventured to draw from the original list. Rather, everything goes to confirm them. At the same time, the additions seem to be sufficiently numerous to justify the compilation of a supplement. This can be most conveniently arranged on the same lines as those laid down for the catalogue itself.² It will be observed that in one or two cases the addition is merely an amplification or a correction of particulars formerly given.

(A) *ISOLATED FINDS FROM ROMAN SITES.*(c) *The Antonine Wall.*

MUMRILLS.—In 1921 Mr James Smith sent for my inspection a worn *denarius* of Trajan, which he had picked up shortly before in the field that lies immediately to the west of the site of the Antonine fort; the type of the reverse could not be identified with any confidence. During the cutting of some exploratory trenches in the same field by our Society there have quite recently been found a legionary *denarius* of Mark Antony, a worn 'second brass' probably of Claudius, a 'first brass' of Faustina Senior (Coh.², ii. p. 427, No. 182) in good condition, and a 'second brass' of Hadrian so seriously corroded that nothing could be made out save the Emperor's head.

ROUGH CASTLE.—In June 1920, a small cutting made by myself, a few yards to the north of the fort, produced a quantity of second-century pottery and a worn *denarius* of M. Antony (Coh.², i. p. 41, No. 39).

CHAPEL HILL.—The excavation of the fort at Old Kilpatrick, begun by the Glasgow Archaeological Society in 1923, has already yielded *denarii* of Vespasian (Coh.¹, i. p. 275, No. 36), Domitian (Coh.², i. p. 472, No. 30),³ Faustina Senior (Coh.², ii. p. 415, No. 34), and *Ælius Cæsar*

¹ *Proceedings*, vol. lli. pp. 203-76.

² *Ibid.*, p. 209.

³ This piece had been halved, and only one half was found.

(Coh.², ii. p. 263, No. 53), as well as a 'first brass' of Trajan (Coh.², ii. p. 52, No. 328), a 'first brass' of Hadrian (Coh.², ii. p. 186, No. 974), and a 'second brass' of the same Emperor (Coh.², ii. p. 175, No. 820).

(d) *Scotland North of the Antonine Wall.*

DEALGINROSS.—In 1755 General Roy saw and surveyed the remains of two entrenchments at Dealginross, near Comrie.¹ They represent a temporary camp and a permanent fort, and the larger one at least is characterised by certain features that suggest a first-century date. When I wrote in 1918, I was unable to associate any coins with the site. Subsequently there was brought to my notice a paper, dated 1786 and entitled "Plan and Description of the Roman Camp at Dalginross, from a Young Gentleman residing in its Neighbourhood," which is preserved among the archives of the Literary and Antiquarian Society of Perth. It contains the statement: "A gold medal was found here, with the impression of *Titus Vespasian* on one side thereof." Further, Mr J. P. Mitchell, Comrie, has shown me a 'second brass' of Domitian (Coh.², i. p. 499, No. 327), which was found about 1905 by a farmer singling turnips within the area of the fort. It had been in good or very good condition when lost, and by a curious coincidence the reverse type was identical with that of the solitary coin recovered at Inchtuthil.² Both of these additions are important, the former as increasing the percentage of Flavian or pre-Flavian issues among the Scottish gold-finds,³ the latter for its bearing on the terminal date of the Agricolaan occupation.⁴ More doubtful is a *denarius* of Alexander Severus (Coh.², iv. p. 425, No. 236), now in the possession of Major Graham Stirling of Strowan, which is said to have been picked up a generation or so ago at Dealginross between Camp Cottage and the Manse; if this be really the coin found there, it can have nothing to do with the Roman occupation.

(B) *ISOLATED FINDS FROM NATIVE SITES.*

TRAPRAIN LAW.—Excavation on this site was resumed in 1919, after being in abeyance for three seasons owing to the war. Thanks to the thoroughness of the supervision, which has been mainly in the hands of Mr J. E. Cree, the number of additional coins recovered has been large. Details will be found in the Reports which have

¹ *Military Antiquities*, pl. xi. For the date of the survey see *Archæologia*, lxxviii. p. 172.

² *Proceedings*, lii. pp. 233 f.

³ See *ibid.*, pp. 255 ff.

⁴ See *Journ. of Roman Studies*, vol. ix. p. 136.

annually appeared in the *Proceedings*. Here it must suffice to say that, apart from 4 or 5 late *Æ* which were so worn and corroded as to be unidentifiable, the 1919-23 list includes *Æ* of Nero, *Æ* of Titus, *Æ* of Domitian (2), *Æ* of Nerva, *Æ* of Trajan, *Æ* of Hadrian (1 certain, 1 probable), *Æ* and *Æ* of Pius, *Æ* and *Æ* of Faustina Senior, *Æ* of Gallienus (2), *Æ* probably of Victorinus, *Æ* probably of Tetricus, *Æ* of Probus, *Æ* of Carausius (4), *Æ* of Allectus, *Æ* of Galerius Maximianus, *Æ* of Constantine the Great, *Æ* with head of Constantinopolis, *Æ* of Constantius II., *Æ* of Magnentius, *Æ* of Valens (1 certain, 1 probable), *Æ* of Valentinian II., *Æ* of Valentinian II. or Theodosius I., *Æ* of Honorius (1 certain, 1 probable), and possibly *Æ* of Arcadius. There was also a billon coin of Alexandria in such poor condition that nothing was discernible save the faint outline of the imperial head on the obverse; its general appearance indicated a date later than A.D. 250. It will be observed that the composition of the list confirms the previously suggested explanation of the presence of Roman coins in the hill-settlement: they seem to have formed the regular currency of the inhabitants. The long gap between Faustina and Gallienus will be noted. In the 1914-5 list there was nothing between Pius and Constantine the Great.

DALRY (Ayrshire).—Mr John Smith kindly sent for my inspection four Roman *denarii* which he found at Aitnock Fort, Dalry. They were of Vespasian (Coh.², i. p. 371, No. 45), Hadrian (Coh.², ii. p. 229, No. 1481), and Pius (Coh.², ii. p. 295, No. 226, and p. 299, Nos. 286 ff.).

NORTH UIST.—A 'second brass' of Constantius II. with FEL TE[MP REPARATIO] came to light in an earth-house in North Uist during excavations carried out by the late Dr Erskine Beveridge. It was 3 feet below the surface.

(D) ISOLATED FINDS WITH NO RECORDED ASSOCIATIONS.

ANCRUM (Roxburghshire).—I have seen a *denarius* of Geta (Coh.², iv. p. 273, No. 183) which was found on the Fairmington Farm in a field through which the Roman road (Dere Street) runs. It is in very good condition, and is now in the possession of the Rev. J. R. Gillies, U.F. Manse, Ancrum.

GULLANE (East Lothian).—In 1921 I was shown a billon coin of Alexandria which had been dug up in a garden at Gullane. It had been struck in the second year of Diocletian's reign, and had the familiar type of Dikaio-syne on the reverse. It may have been one of the many Alexandrian coins that found their way to this country during and after the Great War.

HADDINGTON.—In 1920 a ploughman turned up in a field near Haddington a 'second brass' of Constantine the Great (Coh.², vii. p. 253, No. 215).

DUDDINGSTON (Midlothian).—Among the MSS. of our Society (1780-1) is a letter from Sir James Dick of Prestonfield to the Earl of Buchan, in which mention is made of a coin of Tacitus found in mud dredged up from Duddingston Loch.

EDINBURGH.—A 'second brass' of Augustus (Coh.², i. p. 139, No. 516), which had been in fair condition when lost, was picked up a number of years ago by John Marshall, 9 Saughtonhall Drive, Murrayfield, when excavations were going on at Moray House, Canongate. It was embedded in a ball of clay, and was not discovered until some time afterwards when the ball of clay was accidentally broken.

WHITHORN (Wigtownshire).—In 1922 Sergeant Duncan, Police Office, Whithorn, found in his garden a 'brass' of Julia Domna struck at Stobi (Macedonia). The reverse type is a figure of Victory to l. This, like the Gullane coin, may be a recent importation.

KIRKCUDBRIGHT.—Mr I. A. Richmond tells me that there is in the Museum at Kirkcudbright a *denarius* of Vespasian, which is entered in the register as "found in the Burgh Roods of Kirkcudbright." It had been in circulation for a considerable time before it was lost.

ANNAN (Dumfriesshire).—Mr J. Murray, The Academy, Annan, sent for my inspection a 'second brass' of Hadrian (Coh.², ii. p. 118, No. 166), which was recently dug up in a garden in Butts Street, Annan.

GLASGOW.—According to the *Montrose, Arbroath, and Brechin Review* of 11th November 1814, "a few days ago a Roman coin in a high state of preservation was found in Canon Lane, Glasgow." The metal is not stated, from which it may perhaps be inferred that the coin was a *denarius*, rather than an *aureus*. To judge from the description (which can hardly be quite accurate), it was probably Coh.², i. p. 504, No. 397.

PARTICK.—I have now found my notes regarding the coin of which I spoke¹ as having been dug up here. It was not a Titus, but a Vespasian. The reverse was identical with Coh.², i. p. 416, No. 620, but the obverse inscription, so far as legible, pointed to A.D. 72 or 73, rather than to 71.

CRIEFF.—In 1921 Mr Thomas May, F.S.A., presented to the National Museum a 'second brass' of Faustina Senior (Coh.², ii. p. 420, No. 80), which had been found in Mitchell Street, Crieff, "alongside an old drove-road."

¹ *Proceedings*, vol. lli. p. 244.

PERTH.—Mr Ritchie of the Perth Museum has shown me a 'first brass' of Hadrian (Coh.², ii. p. 192, No. 1042), dug up about 1919 in a garden at Fechny near Perth.

ABERDEEN.—The *Aberdeen Evening Express* of 7th February 1923 records the finding of two Roman coins—Æ of Constantine the Great and Æ of Constans—in Windmill Brae, Aberdeen, about 1890.

INVERURIE (Aberdeenshire).—Mr Graham Callander tells me that the gold coin of Vespasian, to which I referred in my original list,¹ was not found at Inverurie itself, as stated in *Proc.*, vol. xxix., but at Port Elphinstone, the village which lies on the south side of the Don, just over the bridge from Inverurie. It was dug up in the garden of a cottage called Ardennan. It passed into the collection of Sir John Evans, on whose death it was presented by his son, now Sir Arthur Evans, to Sir W. M. Ramsay for the University of Aberdeen.

(A) *HOARDS OF SILVER.*

(b) *South-Western Scotland.*

BRACO (Lanarkshire).—Six *denarii* from the Braco hoard of 1842² were sent for my inspection in May 1921 by Mr S. N. Miller. They belonged to the son of the farmer on whose farm the find had been made. One was of Titus (Coh.², i. p. 455, No. 323), two of Trajan (Coh.², i. p. 41, No. 214, and p. 60, No. 403), two of Pius (Coh.², ii. p. 287, No. 158, and p. 326, No. 571), and one of Verus (Coh.², iii. p. 183, No. 126). Marks on the first of these indicated that the hoard had been buried in a bag of coarse cloth. Along with them there was sent a *denarius* of Gratian (Coh.², viii. p. 127, No. 13), which may have been found in Scotland but had obviously no connection with the rest.

¹ *Proceedings*, vol. lii. p. 247.

² See *Proceedings*, vol. lii. p. 261.

II.

TWO SCULPTURED STONES, A COPED COFFIN-COVER, AND PART OF A SEVENTEENTH-CENTURY TOMBSTONE FOUND IN ST ANDREWS. BY D. HAY FLEMING, LL.D., F.S.A.Scot.

On the 27th of August 1923, the upper portion of a small Celtic cross-slab (fig. 1) was discovered in the south gable of the south transept of the Cathedral, about 2 feet below the broken wall-top and about 20 feet above the level of the ground. This slab bears unmistakable traces of the uses to which it has been put in its long history of some nine centuries. From the weathering on the top it is evident that it had stood in the open, in



Fig. 1. Fragment of Cross-slab at St Andrews—front and back.

an upright position, for a considerable time. By-and-by it was utilised as pavement. This is obvious from the sculpturing on one of its faces being almost worn off, worn off not by weathering, but by the long-continued treading of countless feet. Then it was seized and used as common rubble in that gable, either when it was originally built, or when it was partly rebuilt after the great tempest of St Kentigern's Day, 1409. This fragment of a slab is only 13 inches high, 15½ inches broad, and 4½ inches thick. On the unworn face the sculpturing is clear and sharp. The upper limb of the cross and both arms are covered with a double-cord interlaced pattern. The compartments above the arms are filled with a zigzag fret. There is a double square recess in the angles at the intersection of the arms. On one side there is a spiral and fret pattern, pretty fresh (fig. 2); and on the other side a more open but more weathered one. On the worn face there are little more than traces of the upper limb of the cross, and of the semicircular hollows at its junction with the arms, and of a connecting ring. The mouth of each of the

semicircular hollows appears to have been closed with two circular ornaments.

The other fragment of a Celtic cross-slab (fig. 3) was found in the closing week of March 1924, in the Eastern Cemetery, about 50 yards to the south-east of St Rule's Chapel. Unfortunately, much of it had been smashed off years ago, when the adjoining grave was being lined with brick. Both top and bottom are gone, and it is fractured to boot. The extreme height is $15\frac{1}{2}$ inches, extreme width 19 inches, and the thickness is $6\frac{1}{2}$ inches. The ornament on one face is mainly spiral, but there is some fret as well. The other face shows part of the shaft of a cross and part of the left arm, which are covered with interlaced work. There is a double square recess at the intersection of the shaft and arm. On one side there are traces of a zigzag fret; and, on the other side, slight traces of a pattern. The illustrations of both slabs are from photos by Mr R. B. Strachan. No Celtic cross or cross-slab, or fragment of one, has ever been found before in the Eastern Cemetery, and, in the Cathedral Burying-ground, only one has been found on the south side of St Rule's. Of Celtic crosses and cross-slabs, complete and incomplete, there are now in St Andrews, above ground, sixty-five



Fig. 2. Side view of Cross-slab.



Fig. 3. Fragment of Cross-slab at St Andrews—front and back.

specimens. Some of these, however, are mere fragments. The supply appears to be inexhaustible. If the rate of discovery of the last thirty years is continued for another thirty, we shall have about a hundred!

Some time ago, part of a coped coffin-cover was taken out of the Abbey Wall. Its extreme measurements are: length, 26 inches; breadth

at bottom, $15\frac{1}{2}$ inches; breadth at top, $5\frac{1}{4}$ inches; depth, 11 inches. There are two parallel roll mouldings on the top, each of which terminates in a curve, and in each curve there is an oval tassel or bulb. This is by no means the first interesting object that has been extracted from the Abbey Wall (see *Proceedings*, vol. xlix. pp. 221-3).

On the 29th of September 1923, a modern tombstone in the Cathedral Burying-ground, which was so much off the plumb that it was in danger of falling forward, was moved from its place, in order that a proper foundation might be built for it. Then it was discovered that it had been set very insecurely on a number of rough stones and one fragment of an old monument. This fragment is part of what must have been a large slab, as it measures 4 feet by 20 inches, although no dressed edge remains. The ornament shows by its centre that the slab must have been at least 5 feet 2 inches either in length or breadth. Of the inscription, parts of the first four lines alone remain. So far as I can, I have completed them within square brackets.

SUB HOC TUMULO PLACIDE CONQUIESCUNT OS[SA MARGA]
RETÆ TAILZEOR SPONSÆ IACOBI ROBERSONE IU[NIORIS]
MERCATORIS CIVIS CIVITATIS S[ANCTI ANDREÆ QUÆ OBIT]
TERTIO DIE MENSIS M[AI] 1636 ÆTATIS SUÆ . . .]

There were two Margaret Taylors in St Andrews in the first half of the seventeenth century, and both of them died in May 1636. One was the wife of James Robertson, younger, merchant, citizen of St Andrews, and the other was the wife of Andrew Dickson, elder, maltman, citizen of St Andrews. James Robertson's wife signed her will on the 22nd of April 1636. In the *Commissary Records* she is said to have died on the [blank] day of April 1636. Evidently the commissary clerk was uncertain about the precise day, but knew or assumed that she died soon after making her will, and therefore put April; but the last remaining letter in the fourth line of the inscription on the stone proves that it must have been May, not April.

III.

ACCOUNT OF THE DISCOVERY OF A CINERARY URN WITH OTHER RELICS, NEAR MARCHHOUSE, MUIRKIRK, AND THE EXCAVATION OF AN EARTH-HOUSE AT YARDHOUSES, CARNWATH.
By ARCHIBALD FAIRBAIRN, CORRESPONDING MEMBER.

CINERARY URN WITH OTHER RELICS FROM MUIRKIRK PARISH.

On the 29th of January 1924, a decorated cinerary urn, containing burnt bones and other relics, was recovered from the right bank of the

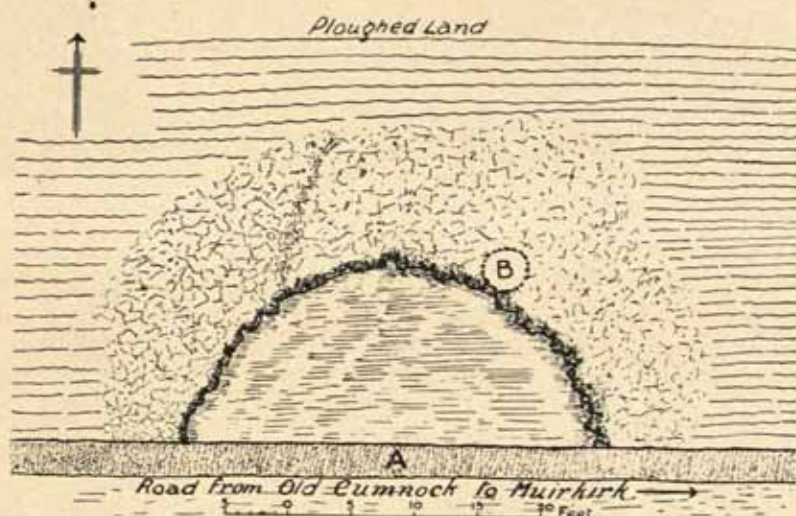


Fig. 1. Plan of denuded Cairn near Marchhouse.

public road leading from Muirkirk to Cumnock, at a point $2\frac{1}{2}$ miles from Muirkirk and 120 yards east of Marchhouse, a cottage situated on the roadside. The site of the find is the crest of a natural sandhill, over which the road takes its course (fig. 1), and where, quite recently, the steep gradient was cut out and the road lowered and widened to meet the requirements of modern traffic. The workmen at the time of the road improvement saw no signs of an interment, and it was on the date mentioned that Mr James Neilson, the road contractor, carrying out some repairs on the spot, noticed that the sand which had fallen from the bank by action of frost and thaw had exposed the urn in question. Information of the discovery was speedily brought

to me, which I conveyed to Major and Mrs Broun Lindsay of Well-wood, and when we arrived on the scene we found that the urn had already been removed from the bank, emptied of its contents, and deposited on the roadside.

A careful scrutiny revealed no further trace of urns that day, but 12 feet west of, and on the same level as, the urn burial—which was 5 feet from the present surface—I found embedded in the dark coloured sand of the cutting two unburnt bones, much decayed and very fragile.

It was noticeable from the discoloration of the filling-in that the urn had been buried in the sand, but how far below the prehistoric ground-level depended on the amount of turf, now converted into fine loam, accumulated there from the original road-cutting. From the depth of soil ascertained later in the exploration of the site, the cinerary urn had probably been buried about 2 feet deep, and there was no evidence that it had ever been contained within a cist. The urn, on discovery, was in an inverted position, covering a large deposit of burnt bones, and containing as well a small urn of the incense-cup type, an unburnt bone pin polished and pointed at one end, a bronze awl pointed at one end and flattened at the other, and an unworked flake of radiolarian chert.

We took charge of the urn in its soft condition, and also of its contents, and after careful drying and hardening the whole was deposited in the care of the Society.

On making a minute examination of the site the following day, I picked up from amongst the loose soil fallen from the cutting and within a few feet of the urn burial, a fragment of pottery showing part of the undecorated rim of a different vessel.

A thorough search of the whole site was decided upon, and carried out under the personal supervision of Major and Mrs Broun Lindsay. With the concurrence of the tenant farmer, a trial trench 27 feet long and 7 feet wide was opened in the field, parallel with the road-cutting and passing within 3 feet of the spot where the first discovery was made. Throughout there was an average depth of $3\frac{1}{2}$ feet of fine loam overlying sand, and the whole was carefully examined to a depth of $5\frac{1}{2}$ feet to clean undisturbed strata, without any further trace of urns being found.

Near the end of the trench on the west side a setting of stones, $8\frac{1}{2}$ feet wide, was encountered and laid bare. Leaving the inner and outer margin of this setting intact, the centre portion was removed and the ground examined underneath, without resulting in any further discovery of relics. The stones continued into the field at a depth of

2 feet below the surface, and they were followed far enough to ascertain their direction and to expose the arrangement of the margin. It was apparent that the setting took the form of a wide circle. There was no evidence of stones on the freshly ploughed surface of the field, nor any unevenness of the ground, to suggest a construction underneath, but by probing deeply the stones could be felt sufficiently well to enable a circle to be traced.

The application of the measuring-tape across the diameter of the mapped-out circle, from east to west, and parallel with the roadway, proved at once that the urn burial (A, fig. 1) occupied the exact centre of a circle 47 feet in diameter, the southern half of which had been demolished by the construction of the original roadway.

The excavation now proceeded with a view to exposing, perhaps, an enclosing wall, or the base of a protecting cairn. The chief difficulty lay in the disposal of the soil, and this was overcome by wheeling it off the area altogether, and by following up the outer margin first as a guide.

The accompanying plan, prepared by Major Broun Lindsay, D.S.O., accurately illustrates the construction found underneath the ploughing, and what is probably the remains of the base of a round cairn of the Bronze Age.

Midway between the surface and the inner margin of the south-west side of the cairn-base, several fragments of a cinerary urn corresponding to the fragment already referred to were found, and associated with them, a good sprinkling of burnt bones. At the same time, a similar fragment was found projecting from the upper soil of the road-cutting, 12 feet distant. All had the appearance of having been broken long ago, and were much overgrown with fibrous roots.

It was evident that the early roadmakers in cutting through the cairn, had broken and scattered with its contents, a thickly made cinerary urn with a plain rim, and had removed the central portion of the cairn covering the urn with the decorated rim; the modern road improvers also missed this vessel by a narrow margin in cutting out the gradient.

The interior of the area was examined carefully, as well as the upper part of the stony marginal base of the cairn, which in the higher parts the plough had somewhat damaged, and which still measured from $8\frac{1}{2}$ feet to 14 feet wide, but with disappointing results. The cairn-base within the margin of stones was next taken up and the ground underneath carefully trenched over, when it was seen that the construction had been laid down on a very poor and shallow soil overlying the sand.

At a point B indicated on the plan, and underneath the part of the cairn where there were most stones, the discoloration of the soil led to the discovery of a small pit which had been dug in the sand, and which

contained a rich deposit of burnt wood charcoal, intermixed with small fragments of incinerated bone. Possibly this was the method adopted for the disposal of the residue of the cremated ashes of the body, but there was absolutely no trace of the cremation having taken place on the spot, neither over any part of the base of the cairn nor underneath it.

In view of the importance of the find of the complete urn and its accompanying relics, the following particulars, gleaned on the spot, may be of interest.

The snowy whiteness of the burnt osseous fragments emptied from the cinerary urn was most noticeable, rivalling the description of the cremated remains of Hector. There were very few, not more than eight to ten fragments of burnt wood charcoal associated with the deposit, showing how carefully the ashes of the body had been gathered from amongst the cooled charcoal of the funeral fire.

The separate deposit of char, mixed with minute fragments of incinerated bone, found buried under the cairn strengthens the idea of methodical care, combined with sympathetic feeling, suggested by even the minor details.

Because of the problematical meaning and use of these diminutive urns, called "Incense Cups," found on rare occasions within, or associated with, cinerary urns, it is unfortunate that this one, otherwise in a perfect condition, should have been emptied of its contents before a minute examination had been made. I am, however, indebted to Mr James Neilson, who emptied both cinerary urn and incense cup, for the following details regarding the latter, and the position it occupied within the cinerary urn. The incense cup had been placed on the ground mouth upwards. It was filled with fine black ashes and a sprinkling of a white material, in small particles, presumably collected from the incinerated bone deposit which had been heaped over it within the urn. The bone pin was found in a vertical position, one end inserted into the contents of the incense cup and the other projecting several inches above its mouth. The bronze awl had also been placed within the incense cup, where it was found.

It is noteworthy that the pointed end of the bronze awl exactly fitted all the eighteen holes pierced through the widest part of the incense cup, while the flattened end of the pin fitted equally well the two circular grooves ornamenting its rim.

It is also worthy of note, that the incense cup was not used in this interment as an urn to contain cremated remains, and it is a matter of interest to inquire into the meaning of the perforations encircling it. Fire-vessels, ancient and modern, temporary and otherwise, have perforations constructed or pierced in them for the indraught of air to assist

CINERARY URN WITH OTHER RELICS, MUIRKIRK PARISH. 337

combustion. The means of fire-raising, in remote times, must have been both slow and uncertain, and a fire once kindled would then, as now, in outlying districts, be carefully attended and kept burning, for conveyance if necessary; as a shepherd conveys a smouldering peat to set alight the heather. When such an important ceremony as a cremation burial had to be carried out, the solemn occasion would demand a sure and speedy means of setting alight the funeral pile. The quantity of black ashes which, on discovery, filled the incense cup, suggests that this vessel



Fig. 2. Cinerary Urn from Marchhouse.

may have been used to convey smouldering material from the burning hearth to the funeral pyre, the vessel being finally included within the cinerary urn, as a sepulchral rite.

The cinerary urn (fig. 2), which measures $13\frac{3}{16}$ inches in height, $10\frac{1}{2}$ to $11\frac{1}{8}$ inches in diameter at the mouth, $11\frac{5}{8}$ inches at the bulge, and $4\frac{1}{4}$ inches across the base, is of dark brown colour, and has a heavy overhanging rim with a straight upright neck beneath, bordered at its junction with the tapering lower part by a slight cordon. The lip, which is sharply bevelled downwards on the interior, is decorated by a zigzag pattern, and the broad overhanging rim by reversed triangles hatched with alternate parallel lines and bordered at top and bottom by double

marginal transverse lines, all impressed with what seems to have been a thin cord wrapped round a core. The neck bears impressions of a round, blunt-ended, wooden or bone implement applied obliquely, and round the lower margin is a row of small narrow loops, the curved end upwards, formed by the impression of a twisted cord. On the encircling cordon is a row of impressions similar to those on the neck.

The incense cup (fig. 3), which measures $1\frac{1}{8}$ inch in height, $2\frac{1}{2}$ inches diameter at the mouth, $3\frac{3}{8}$ inches at the bulge, and $1\frac{1}{8}$ inch across the base, is buff coloured with a tinge



Fig. 3. Incense cup from Marchhouse.

of red in places. In shape it is like two truncated cones placed base to base. Round the rim are two transverse incised lines and the wall is irregularly pierced at the widest part by eighteen small perforations.

The bronze awl (fig. 4) which measures $1\frac{2}{3}$ inch in length, has a thin, flat, spatulate tang, and the bone pin (fig. 4), which is $7\frac{3}{8}$ inches in length, is pointed and rounded at one end, and broken across about one-third from the thick end.

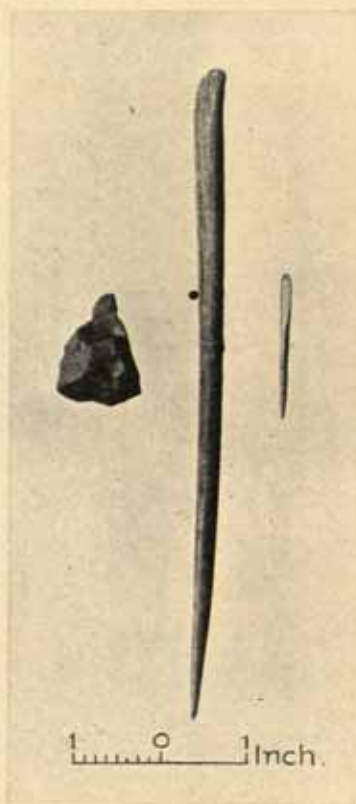


Fig. 4. Fragment of Chert, Bone Pin, and Bronze Awl.

EARTH-HOUSE AT YARDHOUSES.

Place names, though not always quite accurate in spelling, are very frequently of great assistance in archæological research. The name "Yardhouses" conveys in this form of spelling no real sense of its meaning, and might easily be regarded as commonplace to the non-inquisitive ear. The local pronunciation is "Yird-es," the contraction of

Yirdhouse, meaning earth-house, in Scots, which explains how this place got its name.

The structure under review (fig. 5) was brought to my notice by the name of "Yardhouses," and I was guided to the site—described as a "hole in the ground"—by my friend Mr W. Shaw Smith, who is intimately acquainted with Carnwath and its neighbourhood, and later gave valuable assistance in the excavation.

The earth-house is situated on the boundary of two fields, midway between the two farm steadings of Yardhouses, occupied by Mr George Elder, proprietor of one, and Mr John Elder, tenant of the other. The site is a hillock of dry arable ground, surrounded on all sides by land

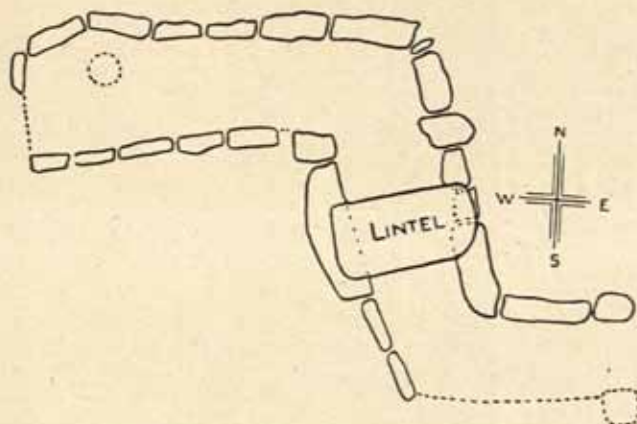


Fig. 5. Plan of Earth-house at Yardhouses.

under the plough, and overlooking the valley and upper reaches of the Falla Burn. The view is extensive, and the elevation is about 900 feet above sea-level. The eastern end of Calla, or Cauldlaw Moor—an exposed tract of land—is close at hand, to the south. This is a stony, heather-clad moor, overlooking two wide valleys and a large extent of country beyond, and is a ridge of great archaeological interest, as it is the site of many cairns.

The local name of the earth-house, I was informed by Mr George Elder, who took the liveliest interest in its excavation, is the "Elflaw Cave." To the west of it, 85 yards distant, is a strong spring, called the "Elflaw Well," which may to a certain extent account for the site selected for the earth-house. Curiously enough, "elfshot" in the form of flint arrow-heads have been picked up from the land surrounding the ancient structure, and one perfect specimen, fully stemmed and barbed, was discovered some years ago close to its entrance.

Prior to excavation, all that was visible of the earth-house was the upper half of a portion of the entrance, which was seen to pass under the march dyke dividing Mr George Elder's land from that of Mrs Dow, of Wampherflatt, Lanark, and farmed by Mr John Elder. One roofing stone was in position, that which carried the stone dyke over the entrance passage, beyond which no trace of the structure was visible, except a grassy sward covering an exceedingly hard surface.

While earth-houses are plentiful in the northern half of Scotland, in the southern half they are rare. "In Fife there are two, Stirling none, Linlithgow one, Haddington none, Midlothian two, Berwick one, Roxburgh two. Not a single example is recorded in the south-west. In the mainland part of Argyll, Ayr, Wigtown, Kirkcudbright, and Dumfries they are not noticed; nor hitherto recorded in the central southern counties of Dumbarton, Renfrew, Peebles, and Selkirk."

The occurrence of this earth-house near Carnwath, in Lanarkshire, made it desirable that it should be excavated, and permission was most willingly granted by the proprietors and tenant, who gave the use of tools and afforded every facility throughout.

Early in May 1923, the excavation was begun by a small but enthusiastic party of voluntary diggers, and continued by spells at convenient intervals. Much encouragement was given by a visit to the excavation by Mr Graham Callander, Director of the National Museum of Antiquities, in the autumn of last year, and by the Council of the Society affording assistance which enabled the structure to be finally dug out in April of this year.

It will be seen, on reference to the accompanying plan, that the entrance passage faces east. It had originally a portal stone on either side, but only the half of one and some fragments of the other remain.

The length of the passage going west, to where it turns to the right, is 6 feet 6 inches. The wall on the right-hand side is intact in all but the original height. On the left it has been removed, but the original cutting through the hard clay soil to form the passage was clearly defined under excavation. This portion is marked with dotted lines on plan, and the original width of the passage here was probably about 2 feet 6 inches. The passage, on turning to the right, is 2 feet 10 inches wide on the floor-level, and continues for fully 9 feet, ending with a total length of about 15 feet 6 inches at two inner portal stone pillars; that on the right, a massive whinstone block 4 feet high, and the other on the left, of freestone, 4 feet 2 inches in height measuring from the floor. From the first turn to the middle distance the passage floor widens to 3 feet 2 inches, narrowing again to 2 feet 10 inches between the inner portals. Both passage walls are of dry-stone building, well preserved, and in their

original state. One huge boulder, 6 feet 2 inches in length and 1 foot 5 inches high, forms the greater part of the left lower course. From the floor-level width of 3 feet 2 inches the walls converge inwards, till at their full height of 4 feet 11 inches, where they are bridged by the cover-stone, the width between is only 1 foot 10 inches, illustrating the ancient method of bringing walls together, and within the possibility of being roofed over with flagstones.

On excavation, the passage was discovered quite filled with very fine soil, evidently silted through the interstices of the roofing flags before they had been removed, and suggesting a great antiquity for the structure. One fragment of early pottery was found embedded in the clay floor.

Beyond the inner portals the chamber turns sharply to the left, leaving a well-squared corner on the right, in line with the right-hand wall of the passage. It is 23 feet 6 inches in length, giving a total length of 39 feet measuring along the central floor-line of the structure from the outer entrance to the inner end wall. Only the lower course of the walls remains. The right-hand wall is constructed with six massive flagstones set on edge, while five, similarly placed, form the left, one flagstone measuring 2 feet 7 inches by 3 feet 11 inches. The width of the chamber varies from 3 feet 4 inches to 4 feet 2 inches at the middle distance, increasing to 5 feet 8 inches where the right-hand wall is curved outwards. At this point—the widest part—6 feet 6 inches from the further end, and marked with a circle on plan, the floor was much fire-stained, showing that the curved portion had been used as a hearth. Fig. 6 gives a view of the inner chamber from the inner end. The large slabs forming the lower part of the walls can be seen, as also the two upright portal stones giving access to the chamber.

The height of the chamber was not ascertainable, as the roofing stones were gone, while all that remained of the end wall, which was straight, and 5 feet 3 inches wide, was one portion of a flagstone in its original position, forming the right-hand corner.

The floor was in excellent condition, and was formed of the stony substance of the soil; it was covered over with clay, well trodden, and smoothly finished. It sloped somewhat boldly upwards from the inner entrance to the further end, thus solving the problem of drainage should water percolate in.

It has been asserted that earth-houses may have been used as store-rooms and granaries, as well as dwellings during the colder times of the year, from the finding of querns within them. It was remarked that the floor surface of this one would have been quite suitable for the handling of grain; nor does the presence of a hearth in any way detract

from the theory of a storeroom, in a structure planned to exclude the cold in winter and the heat in summer.

No tool marks were visible on any of the stones of construction, such as were discovered in the earth-house at Crichton Mains, Midlothian,

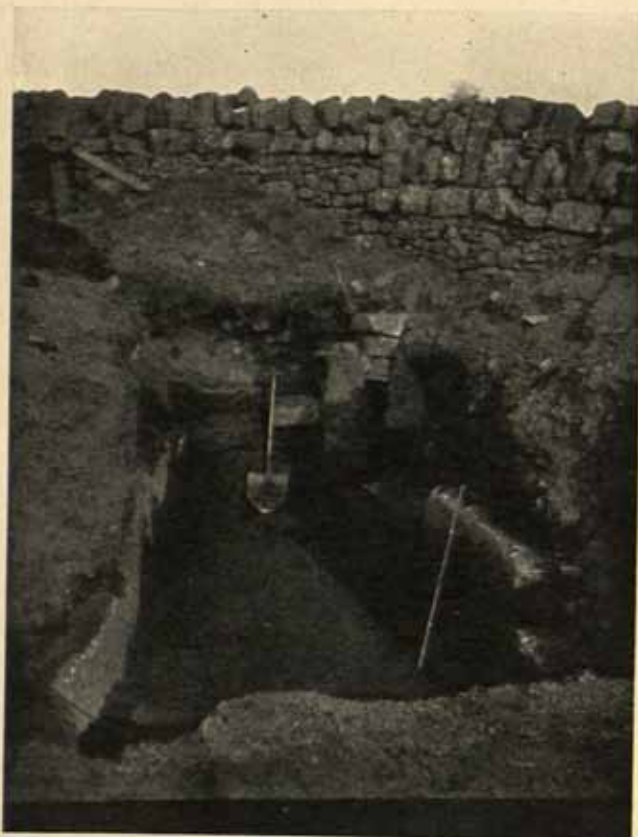


Fig. 6. Inner Chamber of Earth-house from the west.

or the one at Newstead, Roxburghshire. Both these structures had stones built into them showing Roman handiwork, pillaged, no doubt, from deserted forts, but important enough to give both earth-houses a post-Roman date.

The greatest care was taken to examine minutely the soil overlying the floor, but, with the exception of fragments of mediaeval wheel-turned pottery found mixed with the previously disturbed soil within the interior of the chamber, no relics of importance were found. Charcoal

was thickly strewn over the whole length of the floor and passage, in addition to which two flint chips, two teeth of heavy animals, several bones, and a small square of red pigment—which had seen use—were found.

A final search was made outside the entrance, where, at a depth of 12 to 18 inches on the prehistoric surface-level, several fragments of thick unglazed, hand-made pottery were discovered, showing sections of the undecorated rims of two different pots of dark red clay. These fragments are similar to the fragment found embedded in the clay floor of the inner entrance, and probably belong to the period when the earth-house was first occupied.

Several pits were dug over the crest of the rising ground, a few feet east of the entrance to the earth-house, in search of evidence of an above-ground dwelling. The soil, differing from that which covered the structure, was deep, rich, and dark coloured, on a space 15 feet by 10 feet, and slightly lower than the surrounding surface. This accumulation of soil left little doubt in my mind that an above-ground dwelling had once stood there.

I desire to express my thanks to the owners and tenant of the land for permission to excavate, and also to Miss A. L. Shaw Smith for preparing the plan, to Mr W. S. Smith for the photograph, and to Dr G. S. Smith, Mr Brownlee, and others who willingly assisted with the excavation.

IV.

INVENTORY OF THE PLENISHING OF THE HOUSE OF THE BINNS AT THE DATE OF THE DEATH OF GENERAL THOMAS DALYELL, 21ST AUGUST 1685. EDITED FROM THE ORIGINAL DOCUMENTS IN THE FAMILY RECORDS BY SIR JAMES DALYELL, BART., OF THE BINNS, F.S.A.Scot., AND JAMES BEVERIDGE, M.A., RECTOR OF LINLITHGOW ACADEMY.

GENERAL THOMAS DALYELL.

The marriage of Thomas Dalyell, first of Mannerstoun and Binns, with Janet Bruce, natural daughter of Edward Bruce, afterwards first Lord Kinloss, was proclaimed in the Canongate on 1st August 1601, and celebrated at Culross on 2nd September of the same year.¹ Janet Bruce was legitimated on 21st May 1611.² Thomas Dalyell is designated "merchant burghess of Edinburgh," 3rd April 1599; "servitor of Edward Bruce [Lord Kinloss], Master of the Rolls," 5th August 1606;³ "in the Rolls with my lord of the Rolls," Bill of Exchange, 5th June 1610;⁴ "indweller in Edinburgh," Bond dated at Edinburgh, 21st August 1612;⁵ and "burghess of Edinburgh, now of Mannerstoun," 23rd August 1614.⁶ He died on 10th February 1642, and was buried in the family vault in Abercorn Church, leaving a son and a daughter⁷—the son, afterwards General Thomas Dalyell, and the daughter Magdalene married to William Drummond of Riccarton (Linlithgow), contract August 1626.⁸

Thomas Dalyell, "the only son of the late Thomas Dalyell of Binns and of Janet Bruce,"⁹ was baptized at Abercorn on 15th October 1615.⁹ At the side of the entry in the Register in a later hand is written: "The age of General Thomas Dalyell 1712-1615=97; 97-85=12." We fail to guess the writer's meaning. But the entry may have been made by, or at the instance of, Sir Robert Dalyell, the 4th baronet, who industriously gathered information about his family history, and who is apparently responsible either directly, or indirectly through his son Sir James, the 5th baronet, for much inaccurate information, given, for instance, to Playfair of the "British Family Antiquity."

Consistently with these inaccuracies, Dalton in his "Scots Army 1661-1688" states that General Dalyell was captain in the Earl of Morton's

¹ Canongate Register.

² Bond dated at London: Binns Papers.

³ Reg. Privy Seal, 83-214.

⁴ Part. Reg. Sas. Edin., 11-280.

⁵ Linlithgow Sheriff Court Records, 28th April 1642.

⁶ Reg. Privy Seal, 5, 1, and Binns Papers.

⁷ Binns Papers.

⁸ Tombstone in Abercorn Church.

⁹ Abercorn Reg. of Bap.

Regiment at Rochelle in 1628, and quotes as his authority the "Calendar of State Papers, Dom. 1628." There we read on p. 323: "There were also left ashore [at Portsmouth] of Captain Dalyell's men 26 men and their sergeant, and 16 men of Sir John Lacelyes Company," and on p. 324, "the two companies of the Earl of Morton's Regiment left behind." One cannot say how on this evidence Dalton identifies Captain Dalyell with the General.

Dalton adds that all trace of him is lost for eleven years. But from Bills of Exchange drawn by Thomas Dalyell on his father through the agents or factors of William Dick of Braid, we trace him at Paris, 7th March 1634; at Saumur, 10th March 1634; at Geneva, 24th June 1634; and again at Paris, 7th March 1637; and at London, 17th March 1637.¹ He is invariably designated "Younger of Binns," or "appearand of Binns." On 13th July 1637 "Thomas Dalyell appearand of Binns" served on an assize in Linlithgow,² and on 10th July 1638 "*honorabilis et discretus iuvenis*" Thomas Dalyell, appearand of Binns, appeared as attorney for Alexander Lord Livingstone.³ The *iuvenis* of 1638 cannot have been Dalton's captain at Rochelle. From another Bill of Exchange⁴ we find him at Leith on 4th August 1637. Was he on his way to join his regiment? For Captain Thomas Dalyell was admitted burgess of Aberdeen on 7th September 1640.⁵ Dalton says, on good authority, that Dalyell served in Major Robert Munro's Regiment at Aberdeen and accompanied his regiment to Ireland in 1642. That being so, he came home on leave to take sasine as heir to his late father in Blackness lands.⁶ Again on 21st September 1648 Colonel Thomas Dalyell transferred his estates of Binns, etc., to his cousin William Drummond of Riccarton.⁷ His commission as Colonel is missing. During his absence in Scotland Carrickfergus surrendered to the Parliamentary forces on 13th September. After its recapture by the Royalists in the following year, he was appointed Governor, but was forced to surrender the town on 15th August 1650, when "Colonel Thomas Dalyell, Commander of the garrison,"⁸ received a pass to go whither he pleased. Landing in Galloway, he was arrested by the Covenanters, but was immediately released; then followed his exclusion from the Covenanting army at Dunbar on 3rd September 1650.⁹

King Charles II. appointed him General-Major of Foot in the new army that was being raised for the invasion of England, on 10th August 1651.⁶ Taken prisoner at Worcester (3rd September 1651), he was lodged in the Tower of London, but escaped and made his way to the Continent

¹ Binns Papers.

² Part. Reg. Sas. Edin.

³ Linlithgow Sheriff Court Records, 28th April 1642.

⁴ Binns Papers.

⁵ Linlithgow Sheriff Court Records.

⁶ Aberdeen Records.

⁷ Journal of Affairs in Scotland, 1650.

in May 1652.¹ A warrant, dated 1st June 1652,¹ was issued for his apprehension, in which he is described as "aged between 50 and 60, somewhat tall, his hair black and grey, and a wart upon one of his cheeks." How could a man of thirty-seven be described as "between 50 and 60"? Had his hard campaigning aged him so much in appearance? Or were his jailors making a wild guess?

Now tradition and Captain Creighton² state that Dalyell vowed never to shave after the execution of Charles I. Thus, in 1652, he wore a beard of three years' growth; besides, his hair was "black and grey." Consequently he would look much older than he really was.

He is described about the time of Bothwell Bridge (1679) as wearing "a white beard reaching to near his girdle."² It would take nearly thirty years to cultivate such a growth. Evidently he removed the beard about this time, for the existing portrait at Binns represents a clean-shaven man of sixty or little more.

To resume. He returned to Scotland in 1654, and, after the failure of the Highland campaign, again escaped to the Continent. There are preserved among the Binns Papers bore-briefs in favour of Lieutenant-General Thomas Dalyell, addressed by Charles II. to Prince Radziwill, commander of the Polish army, dated at Cologne, 17th August 1655, to the King of Poland, of date 17th April 1656, and (a copy) to Alexis Michaelovitch, Czar of Russia, of the same date. The General took service with the Czar, with whom he remained till his recall by Charles II. in 1665. On leaving for home he received a testimonial from the Czar, dated 6th January 1665. The original document is missing. However, Sir Robert Dalyell, the 4th baronet, obtained from the Russian archives through the Russian Embassy in London, certified copies of the original bore-brief and the testimonial with translations into English, dated 30th March 1762.³

These commissions from Charles II. are preserved³—Commander of the Forces in Scotland, Colonel of a newly raised regiment of Foot, Captain of a Company in the said regiment, Captain of a troop in Lieutenant-General Drummond's regiment of Horse, all dated 19th July 1666; Lieutenant-General to serve under Monmouth, 19th June 1679 (Monmouth's commission as his superior officer was recalled, 1st November 1679); and Colonel of a new regiment of Dragoons [The Scots Greys], 25th November 1681.

Admitted a member of the Privy Council on 3rd January 1667,⁴ he regularly took part in their deliberations up to his death. During the

¹ Cal. S.P., Dom. Cor., 16th Sept. 1651, 9th Jan. 1651-2, 1st June 1652.

² Swift's *Memoirs of Captain Creighton*.

³ Binns Papers.

⁴ Privy Council Records, II., 241.

last eight months of his life he attended sixteen meetings.¹ He was on the sederunt on 20th August 1685,¹ and very shortly thereafter died suddenly of an apoplexy in his house in the Canongate. The date is given as 23rd August in *The Dictionary of National Biography*, but no authority is quoted.² In the confirmation of the General's will taken out in 1724 by his granddaughter Magdalen Dalzell, the words "died in the month of August" have been altered by a contemporary hand to "died on the 21st of August."³ The Privy Council made arrangements for a military funeral, held on the 1st of September, when the streets from the Nether Bow to the West Port were lined with armed burgesses.⁴ The place of burial is not named, but everything points to the family vault at Abercorn.

The Army Orders of the day and the funeral bill of expenses are printed as appendices hereto.

The General's age at his death is not expressly stated, but for these reasons we believe he was then in his 70th year: (1) At this period it was customary to baptize infants as early as possible after birth; (2) the date of 1599 commonly assigned for his birth may be dismissed, for in 1637 he is still dependent on his father, and in 1638 is designated "iuvenis"; (3) in the last eight months of his life he sat at sixteen Privy Council meetings; (4) his two youngest children were minors at his death;⁵ (5) Fountainhall⁵ comments on his death and burial, and adds: "Some were observing that few of our general persons in Scotland had come to their grave without some tach or note of disgrace which Dalzell had not incurred." But Fountainhall says nothing about a wonderful old age, an omission which supports our case. For in his period a man was considered old at fifty, and very old at sixty-five; and (6) the evidence of the portrait at Binns.

For reasons which we have been unable to discover, General Dalzell found the blessing of the Church on his marriages unnecessary. He was satisfied with "espousals de præsente," a marriage, though irregular, binding on both contracting parties. His granddaughter states that he "was never married"; "he had no lawful children of his own body";⁶ Sir Thomas Dalzell was his eldest son by "a gentlewoman whom the General designed to marry."⁶

This eldest son, Thomas, an army captain, whose mother was "Elizabeth Ker, daughter of Ker, brother to Cavers,"⁷ was legitimated 24th January

¹ Privy Council Records (under date).

² *Dict. of Nat. Biog.*

³ Binns Papers.

⁴ Privy Council Records, 25th, 26th, 30th Aug. 1685.

⁵ Historical Observes, Bann. Club, p. 215.

⁶ Memorials for Magdalen Dalzell and her husband anent the estate of Binns, 18th July 1719, and 25th November 1721 (Binns Papers).

⁷ Funeral Escutcheons recorded in the Lyon Office.

1673 under the Privy Seal.¹ He was created a Baronet of Nova Scotia, 7th November 1685. He is the ancestor of the present family of Binns.

The second son, also Thomas, known as "Black Tom" or the "Black Colonel," born of Anna Powslie, was legitimated under the Privy Seal on 17th May 1682. He founded the family of Dalyell of Ticneven (Ireland).

The third son, Lieutenant-Colonel John Dalyell of Muiravonside and Neuk (Stirlingshire), fell at Hochstadt on 29th May 1695.² He is the ancestor of the Dalyells of Lingo (Fife).

The fourth son, Charles, who attained his majority in 1692, was a captain in the army. He died at Darien.² His mother, Marion Abercrombie, drew a pension from the estate after the General's death, and was living in the Canongate in 1701.³

The General had also three daughters—Mary (the mother's name not known), who married David Beatson of Powgild (Fife); contract 1st and 7th August 1677;³ Anna³ (mother not known); and Margaret (a daughter of Marion Abercrombie), who married James Bell in Easter Auldeathie; contract, 7th September 1695.³

It is difficult to form a just estimate of public men in Scotland in the seventeenth century, when the bitterness of political strife was intensified by religious fanaticism. General Dalyell has been in this respect particularly unfortunate. Our popular accounts of him are based on wild tradition and on the writings of political opponents, more or less bigoted. Their descendants in politics and religion maintain to-day the malice and the rancour of their predecessors. Granted that he exercised severity in carrying out the measures adopted by the Government to suppress the Rebellion in the West, the numerous unjust actions of the opposition when they held the reins of power merely prove that the motto of the century was "*Vae Victis*." As a commander he was certainly a strict disciplinarian, but no more severe in inflicting punishment for military crimes than the civil judges of the period, nor even so stern as Wellington in the Peninsula. To a Bismarck he might even have seemed sentimental. In history he stands as a silent, stern figure, to which the Earl Marischal's motto might not inaptly be applied: "They say; what do they say? Let them say." The inventory presents a picture widely different from the figure in popular tradition of a rough, brutal soldier of fortune, coarse in manners, slovenly in dress and manner of living, who roasted alive his miserable prisoners and played cards with the devil. We find a gentleman of taste and comparative refinement, far superior to what prevailed among contemporaries of his own rank and station. With a mind enriched by foreign

¹ Precept: Binns Papers.

² Edin. Com., 25th August 1704.

³ Binns Papers.

travel, he surrounded himself, both at Binns and in his town-house in the Canongate¹ of Edinburgh, with a luxury that was uncommon in Scotland in his day. His experiments in gardening and arboriculture place him a century in advance of his time. His strength of character, his unswerving loyalty, his physical and mental energy, his lion-hearted courage, his military skill, combined with the revelations of the inventory, all indicate a truly remarkable man, whose real merits have not received due recognition.

APPENDIX I.

Army Orders for the Funeral of General Dalyell.²

The orders of the march of the troops at Generall Dalyell his funerallis.

The officers are all to have black scarffis and the troops are to march with their armes in the posture appointed for these occasions as is usual in like caises.

The march is to be begun from the Abbay Church in this maner.

Major Wedersburnis troop of dragoons.

Earl of Drumlanrigis troop of horses.

The one halfe of the regiment of foot guards.

Six peeces of cannon guarded by the company of Matroses.³

The other halfe of the regiment of foot guards.

The magistrates of Edinburgh.

My Lord Chancellor (if his lordship pleases), with the nobility and gentry.

The horse of wair led by two footmen.

A Gentleman with a Generallis Batton.

The hearse adorned as shall be thought fitt with the corpes.

His Majesties Life Guard.

During the procession there are guns to be fyred from the Castle from tyme to tyme.

At the first convenient place beyond the West Port the troops are to sett and give thre salvies in order as they march. The Castle in the meantyme firing a whole round.

Thereafter the horse and the dragoons are to march forwards to the buriall place in the same order they marched through the town and after the corpes are past the foot and cannon are to return.

¹ Wilson, *Edinburgh in Olden Times*, vol. ii. p. 70 (London, 1811).

² Register House $\frac{\text{W.R.}}{136}$.

³ Men who assisted the gunners in working the guns.

APPENDIX II.

Ane account¹ dew be Thomas Dalyell of bins for his father's funerall to George Porteous the 2 of September 1685.

Imprimis for two Losangs Armes with crist and suporters at 15 pund per peace	30	00	00
for 30 seuchanis 8 for the cofen 16 for the pail and 6 for the horses at one pund 12 ss. per peace	48	00	00
for 4 branches ² one both the sydes	20	00	00
for 22 Mortheadis 2 for the cofen and 2 for the Losangs Armes 4 for the hearse 6 for the horses 8 for the pail	22	00	00
for sifers ³ and tears ⁴ for the pail cofen and Losangs Armes	06	00	00
for Making Guilding and painting the head peace	06	00	00
for Guilding and painting of 12 knaps at 6 ss. per peace	03	12	00
for Making Guilding and painting 4 Litle Knaps for the tops of the branches	00	12	00
	136	04	00
for 3 ellis of Lining for making the helmit	02	08	00
Imprimis for ninth ellis of black Glased Caligoe to paint the Losangs Armes seuchanis and Mortheadis one at one pund 4 ss. per ell	10	16	00
for 6 ellis of black Bais to goe about the Losangs Armes at one pund 4 ss. per ell is	07	04	00
for the 4 pleatis the branches was painted one	02	08	00
for the 4 pricks the branches stands one	02	08	00
for two ellis of broad Love ⁵ to cover the helmit	04	16	00
for half ane ell of black and whyt tafity to be a wreth	02	08	00
for 20 ellis of black and whyt ribans to be knots to the helmit and branches at 4 ss. the ell	04	00	00
for three peaper of prins	00	18	00
for a hunder and a half of tackets	00	03	00
to the tayllor for shewing (sewing) the fries to the Losangs Armes and Making the Knots of ribans	01	04	00
for the horse hayre	01	08	00
for blocking the two fraimis of the Losangs Armes	00	12	00
for Ane Murning String ⁶ and glovs be the Captians order	06	00	00
	46	13	00
Summæ of both ⁷	182	17	00

Edinburgh the 8 of September 1685.

Receved the contentes of the above Account for thomas dailyel of bennes and dececharges him therof for ever I say be me.

G. PORTEOUS.

¹ Binns Papers.

² Monograms T.D.

⁴ A streamer put round the hat.

³ A candlestick with three lights to represent the Trinity.

⁵ Heraldic tears.

⁶ A kind of silk.

⁷ Money Scots.

THE HOUSE OF BINNS IN 1685.

The Peel of Mannerstoun was the residence of the Livingstons of Mannerstoun. Thomas Dalyell, burgess of Edinburgh, acquired on 10th September 1612 from Sir William Livingston of Kilsyth, into whose hands the property had fallen, the lands of Mannerstoun, Binns, Easter Scotstoun, Fludders, and Merrilies. Between that date and 1630, as shown by dates on different parts of the building, he erected the House of Binns.

The house consisted of a main building three storeys high, facing south, with two wings running south and enclosing a courtyard, from which, as it was slightly below the ground-floor level, a short flight of steps led to the hall entrance. The avenue ran directly northwards from the high-road to the courtyard gate.

On the ground floor were the dining-room, with two windows facing south and two north, the Laigh hall, the General's own room, with one window facing north and one east, the cellar, the wine-cellar, the pantry, and the larder.

Access to the upper floors was obtained by two turret stairs (turnpikes) projecting from the north front.

On the first floor were the high hall, the "Chamber of Dyce," the vault chamber, and the stone studie; and on the second floor, the green chamber, the stone chamber, the wardrop chambers—west, north, south, and east—and the south chamber. All the rooms on the second floor were lighted by dormer windows.

On the ground floor of the west wing lay the kitchen, the milk-house, the woman-house, and the wine cellar; and on the first floor, the kitchen chamber, the milk-house chamber, and the red room.

The ground floor of the west wing seems to have been separated from the main building by an archway, giving access for horses from the court to the stables. Thus the saddle-house and the brew-house were entered from the court. Above them were the men's chambers—north and south—and the brew-house chamber, and above these the attic called the "Gallery."

The outhouses mentioned in the inventory lay outside the court.

The draw-well was merely a catchment pit into which drained the rain-water that fell on the roofs. A small spring on the northern slope of the hill, known to-day as the General's Well, probably furnished a better quality of drinking-water. In a dry summer, water had to be carried up to the house either from the west pond (the Sergeant's Pond) or from the garden pond. Later, when the alterations were carried out, the draw-well was abandoned and a supply pumped up from the garden

pond, first by man-power then by horse-power, for which a steam-engine was substituted, until the present gravitation supply was introduced.

Some alterations were carried out by Sir Robert, the 4th baronet, but the more elaborate changes were made by his eldest son Sir James, the 5th baronet (1791-1841). He raised the level of the court, built the present dining-room and morning-room, thus closing the archway in the east wing, and made the two-storey addition on the east side of the main building. The Laigh hall and the dining-room were converted into the present entrance hall, the main entrance transferred to the north side, the east and west drives laid out, and the east and west lodges built. It was he, too, who built the tower on the hill in 1826. With questionable taste he substituted battlements for the dormer windows on the north, and built the roof of his new rooms so high as to obscure the dormer windows on the south.

The present baronet in 1914 lowered the roof of the new dining-room, and by means of iron girders saved the fine plaster ceilings from falling in ruin.

THE INVENTORY.

Were a twentieth-century visitor to Binns able to transport himself to 1685, he would at once be struck by the large retinue of servants attached to the household. They led busy lives. In addition to the ordinary household duties, the women were engaged in looking after the poultry, the bees, and the byre, in the bakery, in the brewery, and in the dairy. The winter evenings found them carding and spinning home-grown wool and flax. The men attended to the riding-horses, engaged in the ordinary work of the home-farm, and carried out the General's hobbies of gardening and planting. Some of the trees still adorn the park.

At the dinner-table the visitor would miss the forks (there was only one large fork in the house), but would therefore not be surprised at the large stock of 24 dozen napkins. The napery and wearing clothes not in daily use were stored mostly in trunks. Accustomed to see in the house of the ordinary laird of the period only one wineglass, he would remark the ample supply of drinking-vessels—5 dozen cups, either silver or silver-mounted, over 5 dozen glasses, besides pewter vessels, wooden drinking-cans, stoups, and quaichs. These and the furniture of the high hall and of the bedrooms would indicate to him provision for hospitality on an extensive scale.

He would find a difficulty in adapting himself to the primitive sanitary arrangements, and would miss his morning tub, for only 4 basins are included. But the seventeenth-century ladies are said "to have washed

their hands once a day and their faces once a week," and presumably "a lick with a damp cloth" before dinner would be considered sufficient.

The provision of salted meat and fish was necessary for winter use. No fresh meat was then available, save from the usual laird's dove-cot, for the scarcity of winter-feeding resulted in the stock being reduced to such poor condition that their flesh was unfit for table.

The carpets were spread on the tables, not on the floors. But at some of the windows curtains were hung. He would note, too, that in the bedrooms colours and materials were always *en suite*.

The General was well supplied with materials for tobacco-smoking—6 tobacco-boxes, 3 tobacco stoppers, 2 burning-glasses for lighting his pipe by the rays of the sun, and a cock for striking fire.

For writing-material he had an ink-glass, an ink-horn, an ink-pig, a sand-box, and wafers. His room was furnished with a library placed on shelves round the room, with a catalogue of the books, and a ladder to give access to the higher shelves. And this was in the room of the "illiterate soldier" of a baneful tradition!

The walls were hung with trophies and curios, especially of antiquated and foreign weapons, collected by the General on his travels abroad. Besides, there is entered in the record a well-stocked armoury of serviceable weapons—20 swords of different kinds, 12 pikes, 7½ pairs of pistols, and 34 guns.

Our visitor could enjoy his game of golf in the park, or of chess by the fire in the evening. In their due season he could engage in shooting, hunting, hawking, and curling. Hawking was the General's favourite pastime. It is curious to note that in spite of tradition no playing-cards are on record.

We gratefully express our thanks for the kind and valuable assistance we have received from even the humblest quarters, but especially on the more difficult problems from Mr A. O. Curle, Director of the Royal Scottish Museum, Mr William Angus, Curator of the Historical Department of the Register House, and Mr James Russell, Town Clerk of Linlithgow.

f. 1.

Of Silver Plaite in the House.

A large silver bassone with a large silver lawer (ewer). 2 large silver flaggone stoups. 2 large silver candlesticks. A silver gilded cup, bost with a covering (lid) bost Russia work. 5 silver tankers, 2 of them gilded. A large sugger box of silver. A sugger powder box of silver. A cannell (cinnamon) box of silver. A posset dish of silver with a silver cover german work with a silver division in it. A Muscoviter silver dish called a bratine (corruption of Russian Bratena, a large pitcher or

- goblet) with the character about the outsydes of the mouth thereof. A whyte lyme (earthenware) drinking can with a silver lid on it. A large silver quech having 2 lugs. A duzen of silver cups gilded & bossed. A duzen of silver cups engraven & bossed. 2 duzen of plain silver cups. A duzen of silver trenchers. 2 large silver salt fats (salt-cellars) on of them with a cover & a little silver spoon belonging to it. 13 silver salt fats for the trenchers. A caise with a dozen of knyfs with silver chefts (shafts, handles). 2 dozen of silver plain spoons with a large silver spoon. A dozen of silver spoons with thrawen (twisted) chefts. 2 silver spoons one of them with a short cheft the uther with a falded-in one. A silver musterd box with cover & spoon in it. 3 brandie dishes of silver one of them gilded. 2 litle silver cups one of them gilded. A silver embossed cup. The Mother of pearle. 2 silver whistels with bels & chains with curell (coral) at the end of them. 2 engraven silver candelsticks. 3 duzen off flint glasses in the presse of the dyning rounge. 2 watter potts of flint with covers. 2 caddell (caudle) cups of flint glass with covers. 2 porringers of flint glasse with covers. 2 pourle crows (small, round drinking vessels) of flint glasse.¹ 2 butters of flint glasse. 3 strings of curell beids whereon there is 143 beids. Another string of beids whereon there is 160 small beids severall syses.
- f. 2.

In the Dyning rounge (the east part of the present entrance hall).

- f. 3. Ten high lether ruschie (Russian) chayers. A litle rushie lether chayer. A pendelm (pendulum) knock (clock) with a caice. A weather glase. A brase (brass) cuiler. A cave (case) full of glases. A chimnay (brazier). A pair of taings with a shuffell with brase bosses. An iron porring iron (poker). A Bible. An Inkglass. A Sandbox. A box for holding wafers. 2 large watter glases. An oyle glase. A Vinnegar glase. 2 wyne glases. A brandie glase. A doog leisch. A chimnay brode. A large faulding table. 4 cottoun courtens on iron rods before the four windows in the dyning rounge.

In the litle studie in the dyningroume (a large cupboard in the depth of the wall).

A litle cabinat full of shutles (small drawers). A box with 3 shotles. A box full of mathematicall instruments of brasse & steill. A box with shells (scales) & weights for weighing of gold. A timber box wherein is

¹ Quotation from "The Unluckie Firmantie":

"They had sucked such a juce
Out of the good ale cruce,
Wherein they found no dregges,
That neyther of them his head
Could cary home to his bed,
For lacke of better legges."

f. 4. all the Generalls comissions, passes & letters from the Kings of Britane that he served & the Zar of Musco. A Tweise (case) full of instruments with specticles in it, our lait kings face cut out in steill on the one end of it and his own arms cut out in brase besyde it. A large brase prospect (telescope) in 4 pairts. Another large prospect in whyt iron with a chagarin skin on it. An instrument of timber for casting of ball. A foot of measure (foot-rule). Two litle timber boxes with a compase of timber in one of them. A quadrat of brase in a chagarin caise. 2 timber drawers. A pair of heill spurs. A bairns plomash (plume of feathers). 2 Strong fyls. A box with 2 pair of spectiels one set in silver and the other in bone. 5 pas kies for the doors in the house. 3 small kies for the presses in the house. A little hammer. A broad whatstone. A bon Sundyell (for carrying in the pocket). 3 tobacco boxes. A burning glase with a caise. A pair of specticles set in silver with a lether caise. Another pair of specticles set in silver with a over gilded caise. Another burning glase. A weight for weighting of coyne. A tin box with a spoon in it. A silver inkhorne. A litle watch with a chagarin caise & a silver chayne thereat. Severall keys belonging to the house doors & locks. A pair of steill buckles. 2 scourers for pistolls. 2 tobacco stappels (stoppers) with stamps on the ends one of silver anther of brase. Anther broken brass staple. A litle barrell of powder with a pock full of small graith (probably gear or tackle). A painted prospect (telescope) of bon in 3 pieces. A timber prospect. A Turkish brase instrument in a caise. A steill tobacco box. A silver brusch. A multiplieing instrument. A whyte iron box with saw (salve) in it. A paper full of gilded brass nails.

f. 5. *In the other press in the dyningroume.*

A litle cave with a cover with glases. A iron ligour (camp) tobacco box. A timber tobacco box. Thrie mouse traps one of them a chak trap. Some pound weights of ame (alum, used for curing skins). A dutch hinging lock.

In his own chamber (now the "Blue Room").

It is hung with brown drogat hingsings. A table cloath of that same drogat. A bed of timber. A feather bed 2 breided. A down bouser (bolster), 4 down cods (pillows), a litle one. A steiched stryped covering covered with the drogat that the rounge is hung with. 4 pair of bedplaids, one of them a stryped pair. A looking glase. A chamber box with a pan in it. A chamber pot. The bed in that rounge hung with the same drogat. A chimnay. A pair of taings & shuffell with brase bosses. 2 porring-irons one of them with 4 taes. Ane iron shuffell with ribs for ridling. Ane iron box with an inkhorne in it with an iron cock for stryking of fyre, & an iron sand box in it. An empty weather glase set in timber with the figures relating thereto set in brase. 3 pair of snuffers, 2 of

- them of brase. 3 brase cleicks for hinging anything on. An iron cleik where the glase hings. 3 horne combs, 2 timber combs. A little pouder horne. A litle iron studdie fixed in the North window in that rounge. A litle studie behind the door in that rounge wherein are several fyls of all sorts, with 2 axes, 2 hammers, a chissell & a plain. A peuther baisin belonging to that rounge. A pair of bellises (bellows). 3 ruschie laigh chayers. Ane old fox lynng wes formerly in a coat. 4 pair of hulster pistolls. A sable lynng wes formerly in a coat. 3 pair of iron pistolls. His own chable (crooked sword, or hanger). A whinger (a sort of hanger, which seems to have been used both at meals as a knife, and in broils) & patrontash (a military girdle, for carrying ammunition). A broken knotted stafe. A Spanish rapire with a silver wayer handle (guard of wirework). 2 broadswords, & a litle chable with a bon head, & a silver handle in a chagarin scabert. A pair of pistoll hoise (covers). 2 leather belts for ane maill pillion. Ane old lether sword belt. A pair of great iron spurs. 2 Muscoviter poll axes. A Pollonian poll axe. A blunderbusch. 2 Spanish reids (javelins), one of them with ane head of princes metall. A double barrellid carabine with a bagonet in the midle of it. 2 Cossack riffell guns. A litle chable. Ane elnwand (ell-measure). A Pols carabatch (euirass). 2 litle sticks one dyed rid the uther with a Moors head on it. Twa presses in that same rounge in the one is the hail papers belonging to the lands of Caldwell which was gifted by our lait King of blessed memorie to him and also the papers of Mannerstoun, Binns, Scotstounhill, Merrielies, Carfletts, the lands of Blackness, all these wes his Father's purchase, and also the papers belonging to the lands of Waltoun, Caldecotes, Stacks which wes his conquest; & also the papers of Gruikfoot, Parkly, Philpstoun Milne which has been bought since his death as they shall signifie for whose behoof they are to be.

In the uther presse.

- f. 7. A stamped taffety night gown. A stamped calligoe pock therein is a mutch (night-cap) of the same that the night gown is of. A satin cape. 2 sueit (suit? or sewed?) bags of that same the night gown is of. A comb bag of that same that the night gown is of with ane looking glase therein. A pair of stamped slippers. A whyte stamped collet (cape, or collar for a jerkin). 2 large brusches. 2 pouder boxes & a small brush in one of them. A collar cloath of the nightgoun. A black leather bag wherein is ane broydered patrontasch. 2 pair of buff gloves. A satin night mutch. A rid leather cover to a sword hilt. A pair of gray cloath half sleives. 2 collars of gray cloath with balin (whale-bone). A rid steitched mutch. A pair of old murning gloves. A lether pock with some gouff baes (balls). A grein velvet house (mantle) broydered with gold threid with a pair of hulster tops therto belonging. A pair of halking gloves. 5 ells of black cloath. 2 pair of Pollonian boots with iron heils the one pair

yellow, and the uther reid. A pair of gray stockings lyned with beirskin. 2 pair of mittens lyned with beirskin. A twilted mutch. A sword belt of cloath. Round about the said rounge is locked shelves (shelves) wherin is his haill bibliothick conforme to the catalogue therin lying conforme to the alphabet that is therein written. A cutthroat (dark lantern) in the little office house (privy). 16 iron rods. A ledder for climeing up to the books. An inkpig (ink-pot of earthenware). A gilded lether box. A rid leather box.

In the Saddlehouse (now the Smoking-room).

- f. 8. 8 Broad swords. 2 Whingers with 3 knyves in one of them. A long durk. Thrie fyre locks with ane baganet. A Sword staffe (sword-stick). 2 carabins. Ane elnwand. A great plain (a large drawing-knife). A Pistoll. 2 Quivers with arrows. 7 bows. A boss (hollow) reid. 3 iron clubs. 17 plae clubs. A pistoll scourer. A hulster dryer (meaning not known). Several rousted keys hinging on a string. 2 Sumpter chists (for pack horses) with a saddle belonging therto. A new ryding saddle with a cover lyned with grein velvet. A timber bed. 2 Muscoviter clog (log) bags. An old villies (valise). A pair of hachamis (racks or frames) belonging to the Sumpter chest. A Curling stone of stone. A Curling stone of leid & iron. A Timber Curling stone. Several peices of old iron. 2 pair of Kams (calms, bullet-moulds) for casting of musket and pistoll bollat. 4 old stand collars (colours). A pair of buits. A whyte beir skine for a horse deck. 2 lather houses (housings). 9 old saddles. A leid leg (probably a bar of lead). A ligour chist. 4 pair of thick hoise therin. A haxell (an ash or hazel box) chist with a snedding knyfe (lopping knife for some special purpose). Several old brydell ringays & old brydles. A watter glasse. A ligour bed. A Tent with staves & pins belonging therto.
- f. 9. A purse with some leid bollats. 2 iron sawes. 2 plains.

In the Laigh Hall (now the west part of the entrance hall).

8 chayrs of rushie leather. 2 tables. 2 seed (the inner husks of oats separated in grinding and preserved for making sowens) boxes. An iron chimnay. 2 iron broads the one for the dyning rounge chimnay the uther for his own chamber chimnay with 2 pair of handles for lifting the said chimnays. A pair of taings and shuffell with brass bosses. 2 buckets (wooden box with 2 lugs). A bairns table. A kaill bell (dinner-bell). A halk bag. 2 lewers (hawk lures). The chimnay broad in 2 halves. 11 pycks (pikes). 2 Standart staffs. 2 rubbers (brushes). A Spanish bussome. A ruch (rush) head. 15 bandallier strings with some bandaliers at them. 14 Muscats & a carabin barrell. 10 fyre locks. A scouring wand. Knags (knobs) for hinging of clocks & coats. 2 ambries (a press in which the provision for the daily use of a family in the country is locked up) in the hall with fixed locks. A presse in the hall with 18 timber

shottels. 2 mum glasses, 9 wyne glasses, 6 drinking queechs, a norroway timber can, ane urian glasse (for containing urine for medical examination—the urine was tested by the grounds, the smell, and the taste), 3 bon hefts of knyfes. Above the by-buird table, a large window tirlid (netted, latticed) for birds. In the transe (passage) in the laigh hall hinges a dae (doe) net with all its furniture & several uther old nets for taking of fisch. In the transe in the laigh hall is anuther window tirlid for birds. The windows there on the north syde is stenchelled & tirlid, the north f. 10. windows in the dyning rounge also. Before the South Windows in the laigh hall is a large volrie (aviary) tirlid with a large cage upon the top of it tirlid and itself theiked with leid and sklaite. There is severall iron supporters in it for holding of birds meet and ther nests. A rattoun fall (rat trap). 2 buckets one of them branded (bordered) with iron.

In the High Hall (now the drawing-room).

3 tables with 3 large carpets. 2 dozen of carpet chayers. A cuiller of peuther. A large Bible of old Scots print. A table broad with chess broad & men therto. Ane iron chimnay with brass bosses. A pair of taings and shuffell with brass bosses. A resting carpet chayre. 2 globs.

In the chamber of Dyce (the best bedroom—"Chambradeese" now the "King's Room").

A suit of fyne Arass hingings. A cloath bed lyned with a pink taffetie lyneing. A freinge of the colour of cloath & lyneing round the bed. A steiched mat of the lyneing. A down bed thrie breided. A down bouter. 3 pair of blankets 3 breided. A faulding bed with a feather bed & bouter. A firr table. 2 cods (pillows) belonging to the great bed. 2 pair of bed plaids belonging to the faulding bed with a steiched drogat mat. 2 cloath table cloaths one of them for the faulding bed the uther for the firr table. They are freinged about with a small freinge of the collour of the freinge that is about the bed. A large looking glasse. 2 arm chayers. 2 backed chayers. 4 stools. A foot stool which hath cloath of the curtins & freinges of the collour of the bed & lyneing. A pair of standers. A chamber box & a pan in it. A chamber pot. f. 11. A pair of taings & a shuffell with brase bosses. Ane iron chimnay. Ane chimnay broad.

In the Voul chamber (now the "Pink Room").

A suit of gilded leather hingings. A cloath bed with a yellow taffetie lyneing with freinges of the colour of the cloath and lyneing round the bed outside and inside. A steiched mat of the lyneing of the bed. A thrie breided feather bed. A feather bouter. 3 pair of blankets 3 breided. A faulding bed with a feather bed & 3 feather cods. 2 pair of

bed plaids. A steiched droget mat. 2 cloath table cloaths with silk freinges of the collour of the bed & tyning. A firr table. A looking glasse with ane iron cleick wheron it hings. 2 armed chayers; 2 backed chayers; 4 stools; a footstool: all covered with the cloath of the bed with small freinges conforme to the bed. A chamber box with a pan in it. A chamber pot. Ane old brush. A pair of standers. A pair of taings and shuffell with brase bosses. Ane iron chimnay & chimnay brode.

In the Stone Studie (now a staircase).

A suite of clow (clove pink) colloured hingings. A covering of a bed with a timber bed. A feather bed in it. 2 silk cods, one with downe the uther with feathers. A Canobie (canopy) of that same that the hingings is of. A pair of taings with shuffell bossed with brase. Ane iron chimnay.

f. 12.

In the black trunk there is

5 pair of holland sheets thrie breided. 2 pair of lining sheets 3 breided. A pair of lining sheets 4 breided. Eleven pair of lining sheets 2 breided. 4 holland codwaires (pillow-slip). 21 lining codwaires. 4 pair of spitting (worn) sheits. 2 peices of course round dornick (linen cloth used for the table) the one peice 13 elns, the uther also 13 elns. 2 ligour chists. 11 dozen of dornick naprie in the chist & 2 dozen serving the house. 5 dornick tuells (towells). 21 dornick table cloaths. 7 dozen of damis (damask) naprie. 6 damis table cloaths. 2 dornick table cloaths. A lining tuell & a dornick tuell. 2 dozen & 10 of dornick naprie. 4 peices of grein droget, consisting of 45 elns.

In a litle black trunk.

A suit of old grein taffetie courtins wherein is 8 peice with the pand (a narrow curtain). A grein satten broydered coller cloath. A shirrie colloured Morallae tabie (dark brown wavy silk) coller cloath with a deip gold and silver bon lace about it. A blue saten coller cloath with a gold bone lace upon it. A Shirrie cesnut (sarsenet) coller cloath with a silver lace upon it. A stamped cesnut night gounne lyned with cesnut with silver threed throw it. 2 peices of gilded leather. Some elns of black & whyte lace. The Patron (pattern) of our arms upon whyt fries. A leather tasch (sabretache). A litle stripped table cloath. A parchment box wherein is 3 flanan face cloaths (for protecting a baby's face); 2 holland sueild (swaddling) belts; 2 bairns shirts; a bairns shoulder
f. 13. sheit; a bairns laced bib; a laced face cloath; a laced gravat; a laced mutch; a croce cloath; a pair of laced gloves; a pair of laced cuffs; 2 plain holland baiglets (an undershirt worn next the skin or a piece of linen worn above the shirt of a very young child); a pair of plain holland sleeves; a plain holland gravat; a pair of plain holland gloves; a fauldand

face cloath with hems and purlins (fringes); a holland bib with hems & purlins; a pair of cuffs with hems & purlins; 2 stay bands, one of them plett, anther bib with hems; a holland pinour (apron); 2 holland navell cloaths, and a double lining cloath.

In the Grein Chamber (now the "Sea Room").

A suit of grosser (coarser) arras hingings than is in the chamber of Dyce. A cloath bed lyned with a blew taffety with a freinge in & out of the collour of the cloath and lyneing. A steiched mat of the lyneing of the bed. A thrie breided feather bed. 2 pair of bed plaids 3 breided. A faulding bed with a feather bed & bouster. 2 cods, 3 pair of bed plaids. A Steiched drogat mat. A firr table. 2 table cloaths one of them for the table the uther for the faulding bed of the cloath of the bed and freinges conforme to the bed. A large looking glass which stands in the Milkhouse chamber. 2 armed chayers. 2 backed chayers. 4 stools covered with the cloath of the bed with small freinges conforme to the freinge of the bed. A pair of standers. A chamber box with a pan in it. A chamber pot. A footstole covered with the cloath of the bed with freinges conforme. A pair of taings with shuffell brase bossed. An iron chimnay and chimnay broad.

In the Stone Chamber (now the top Bath-Room).

- f. 14. A suit of rid hingings with gilded slips. A cloath bed with a rid & yellow freinge. A rid rug. A feather bed & bouster. 2 pair of bed plaids. A hurle (truckle) bed with feather bed & bouster. A blew covering with yellow pasments (strips of lace or silk) lyned with harne (coarse cloth). A firr table. Ane old carpet. A looking glasse. A brusch. A chamber box without a pan. A chamber pot. A pair of snuffers. A pair of taings with shuffell brase bossed. An iron chimnay & chimnay brode. An iron cleick whereon the looking glase hings. An old rushie leather chayer. 3 shewed stuils.

In the Westmost of the Wardrop Chambers (now the "White Room").

A wainscot (oak) table. A shewed stooll.

In the South Wairdrop Chamber (now the "White Room").

A table. A chartour chist.

In the Northmost Wairdrop Chamber (now the "North-East Room").

A faulding table. A firr bed. A shewed stooll. A cabinet full of shottles. A lathrone (desk) with shottles covered with grein base. A litle trunk covered with selchskins (sealskins).

In the Easter Wairdrop Chamber (now the "Priest's" Room).

A suit of stamped grein hinging^s. 3 laigh rushie chayers. A bed hung with sad gray droget with ane worset (worsted) freinge about the courtins & pand. A feather bed & bouster. 2 pair of bed plaids. A bed covering of the courtins & pand. A pair of iron taings with ane iron f. 15. chuffell. An iron chimnay & chimnay brode.

*In the Transe (passage) betwixt that chamber & the South chamber is an office house with a box.**In the South Chamber.*

A suite of blew hinging with yellow pasments. A bed hung with blew courtins with yellow pasments, & freinges about the pand. A feather bed & bouster. 2 cods, 2 pair of bed plaids. A covering of the cloath that the bed is hung with with yellow pasments on it. A hurle bed (a low bed moving on wheels). A feather bed & bouster in it. A firr table with a blew table cloath of that same that the rounge is hung with. A chamber pot. 3 shewed stools. A looking glase. An iron chimnay. A pair of taings & chimnay broad.

In the Kitchine Chamber (above the present servants' hall).

Twa peice of aras hinging the rest of the room hung with grein droget. A bed hung with gray sarge. 3 knups (knobs) upon the top of it lyned with gray sarge. A feather bed & bouster. A feather cod. 3 pair of bed plaids. A bed covering of sarge lyned with plaiding of that same sarge that the bed courtins is of. A faulding bed. A feather bed & bouster. 3 pair of bed plaids. A steitched twilt of gray droget. The faulding bed has a cover cloath of that same sarge that the meikle bed is hung with. A laigh rushie leather chayer. 2 shewed stools. A looking glase. 2 litle boxes for holding of womens musts (hair powder). A f. 16. chamber pot of peuther as all the former are. A chamber box. Ane iron chimnay. Ane iron chimnay broad. A pair of iron taings with iron chuffell. A marbell mortar with a timber pistoll (pestle). A litle small seive. A peuther bairin. A timber bucket (square wooden box with lugs for coals, etc.).

In the Rid rounge (now above the servants' hall).

A bed hung with old blew courtins with blew & whyte pasments on them. A feather bed & bouster. A twilt of harne stroped (stuffed) with ulla (wool). 2 pair of bed plaids. 2 yellow & rid Scots coverings one of them lyned with pleiding. 2 shewed stools. 4 trunks covered with leather. 2 ligour chists. A litle timber chist. An iron chimnay. 2 dozen & one servit (napkins) of dornick. 6 table cloaths of dornick.

3 old by-board table cloaths. 2 pair of yearn windle blaidis (wooden pegs for holding the skein). 2 yearn windle feet with boxes. 2 hand reills with ane chack reill (reel for winding yarn).

In the litle Studie in that rounge.

4 large lame pigs (earthenware vessels). 4 pair of cairds (for carding wool). 3 heckels (hackling combs). 4 guising irons one of them locked (for crimping).

In the Milkhouse Chamber (on the first floor of the west wing).

A bed hung with old rid cloath courtins with a silk yellow pand about it. A feather bed & bouser. A rid old covering. 3 laigh rushie leather chayers. A faulding bed. A trunk covered with black leather. A timber box under that trunk. A highland plaid. A brass mortar & pistoll. Ane iron chimnay with iron shuffell & taings. A peuther chamber pot.

In the Woman House (the servants' hall).

- f. 17. A standing bed of timber wherein there is ane calve (chaff) bed & bouser, 2 pair of bed plaids, a Scots covering. A faulding bed wherein there is a feather bed and bouser & feather cod. 2 pair of bed plaids. Ane iron chimnay. Ane iron cruik. Ane baking girdle. Ane pair of iron taings & chuffell with ane brase head. Ane iron for holding of guise irons. A fir table. 5 timber stools. 3 pair of oull fyning combs (used in combing long-stapled wool; short-stapled wool is carded). A brass bed pan with ane iron handle. A coall ridle. A meill seive. 3 lint wheills (spinning wheels). 2 oull wheills. 3 iron pins for twisting of worset. A timber bucket. Ane scellatour (a pan). A salt-fatt (salt barrel). A brase shell & baik (scale and beam) with a pound weight wherein is halfe pound, quarter pound, etc.

In the Milkhouse.

2 kirns. 2 kirne staffs. 6 whyte lame plaits & 3 blew & whyte ones. 2 whyte lame trunshers. Ane mill sane (milsie=milk strainer). 3 milk tubs. A milk lugged tub. A milk leadgalloun (vessel for containing liquid). A whyte lame passet (an earthenware posset dish) dush. An iron calve shivell. 2 chesells (cheese-vats). A burnestand (a water-barrel). 2 wash barrells (swill-tubs). A earthen chamber pot. The milksae borrow (the wooden frame that carried the cloth milsie). A cheise kesart (wooden vessel in which the cheese is pressed). 4 timber skelfs (shelves) fixed to the Milkhouse. A meill barrell. A milk kitt (wooden vessel or pail in which milk dishes are washed). In the Woman House there is a Press wherein is the Peuther Work :—7 large peuther plaits. 9 peuther plaits of ane lesser syse. 6 peuther plaits of ane lesser syse. 8 peuther plaits of ane lesser syse.

11 peuther plaits of ane lesser syse. A deip broth plait of peuther. An old peuther plait. Six peuther ashet (meat-plates) plaits. Thrie masarins (a dish to be set inside a larger vessel) of peuther. Ane old peuther basin. 3 soll plaits (the dish in which the masarin stood). 4 peuther flagan stoups. A peuther pynt stoup. A peuther chappin (about a quart (Eng.)) stoup. A peuther mutchkin (about a pint) stoup. A English chappin peuther stoup. 2 English peuther mutchkine stoups. 2 peuther pans of chamber boxes. Ane brass chaffin (chafing) dish. Ane iron chaffin dish. Ane peuther eg plaite. A jairdine (a large chamber-pot) of peuther. 5 dussane of peuther trunchers. 5 chamber pots. 2 peuther gairdners for setting plaits on. A peuther bed pan. 11 peuther sasers (dishes for holding sauce). 2 litell peuther porringers. 8 peuther candellsticks. 8 peuther sockets. 12 brass candelsticks. 2 brass sockets. A brass snuffin dish. 4 large peuther porringers. 2 pair of brase bosses for the upper hall chimney. 8 old peuther trunchers. 3 pair of old brass snuffers. A pair of new iron snuffers. A pair of new brase snuffers. Of the above mentioned plaits are twelve in the kitchine, with ane egplait and ane baisine.

In the corne house.

A corne girnell (corn-chest) with a division in it. 2 fourth pairt (forpeit = $\frac{1}{4}$ peck) disches.

In the Girnell House (Granary).

2 meill sives. A brase shell with an iron baik. 2 fyfty pound weights of iron. A stone weight of iron. Ane eight pound weight of iron. A four pound weight of iron. A twa pound weight of iron. 2 large girnells the one with 4 divisions & the uther with twa. A meill firloft. A corne firloft. A meill peck. A corne peck. Ane iron baimain (a large wooden dish used for carrying the meal from the girnell to the bakeboard, or for holding meal for immediate use). Ane iron candelstick. A timber stool. 2 old timber chayers. 2 meill barrells. 3 uther barrells. A barrell with some powder in it. 2 scoonschions (candelabra). A pair of timber brods for weighting. A meill straik (wooden implement with straight edge for levelling measure of grain). A great iron swie (swinging bracket beside the fire). 2 iron gavellocks (pickaxes). 2 iron mattocks. 2 foot spaisds. An iron scupe (grain-scoop). A timber plaite.

In the Men's Chambers (now the Tent Room): the North Chamber.

4 timber standing beds: in one of them a feather bed & boucher. Ane f. 20. old grein rug. 2 pair of bed plaids. An old blew rug. In the other bed a feather boucher, 2 pair bed plaids & a Scots worset covering

In the South Chamber (now the Tent Room) where the men lyes.

2 standing timber beds, in the one there is a feather bed & bouser. 2 pair of blankets. A Scots covering unlyned. In the uther bed a feather bed & bouser. 2 pair of bed plaids. A steiched blew covering lyned with plaiding. A litle studie of timber. A timber table.

In the Breichouse Chamber (on the first floor of the east wing).

Hung with a suit of old strip hings. 3 litle studies. A standing bed with courtins of grein droget. 5 knups lyned with the same. A feather bed & bouser. 2 twilts stopped with owll. 2 pair of bed plaids. A covering of the droget that the bed is hung with lyned with plaiding. A hurle (bed on wheels) bed, with a harn twilt (quilt) twilted with oull. A litle rushie leather chayer. An iron chimnay. An iron porring irone. A chimnay broad.

In the Stable Chamber foirgainst (on the first floor of the east wing) the Breichouse Chamber.

A standing bed hung with a suite of old droget hings with a harne bed with feathers in it. A faulding bed. An iron chimnay with iron taings & shuffell.

In the Gallerie (now the Attic).

A large trunk barred with iron. An iron jack (meaning unknown) of a box. A scellatour. 4 bairns' chayers. A wainscot table. A pair of f. 21. twisters for silk or yarne. 7 pair of oull sheirs. 2 clooves (instrument that closes like a vice, used in the preparation of flax, or for sharpening saws). A bed pan. A large wand (wicker) basket. 2 milne roses (something like the spray of a watering-can). A dussan of heuicks. 8 iron stenchells (iron bars). Severall uther pieces of iron. 4 pillisies (pulleys) for the jack. 2 glass chists for flours. 4 dussen of new timber trenchers. 2 Millan glasses. Severall loisans (panes) of glasse. 4 timber boxes. A timber stooll. A chamber box with a pan in it. Ane iron chimnay. A pair of taings & shuffell with brass bosses. A timber hat caise. A wand hamper. 5 old whyte iron dishes. A feather stand. A narrow twilt stooped with oull. A litle studie wherein is:—2 hunting stocks. 3 pair of bed plaids. 4 feather cods. 6 old feather bousers. Some timber pynt coigs (wooden bowls) & chappin coigs with some horne spoons.

In the laigh Stable Chamber.

3 old timber stands. 6 barrells & a litle stand. 6 timber boxes & a large timber box. A litle timber chist with a lock on it. A frame of

timber with a wayer on it. 2 hand creills. 2 old wand hampers. A large timber press with 2 timber fizes (snibs) with an iron handle. Ane swingling stock (yoke) with a swingling trie. A pair of baxters (baker) creills.

In the Brewhouse (on the ground floor in the east wing).

- f. 22. A leid (a brewing utensil) with a cover. A Masken fat (mash-tub) with a cover thorne (masking-rung, for stirring the malt) & taptrie (spigot). A wort stone (probably a stone trough for cooling the wort). A pair of iron taings. Ane iron coall raik. Ane scullione (an instrument for cleaning). Ane peill (a baker's long-handled shovel) for the oven. Ane baik house table with ane iron skraiper. A knocking stone with a mell (mallet). A bucket (square trough for carrying coals). A barm (yeast) barrell. 3 wort stands. A tumnell (wooden vessel). 2 laid gallouns (vessel for holding liquid). 2 Cummings (vessel for holding wort). 2 trowes (troughs). A sheep stool (Scots cuddie). A wort dish.

In the Kitchen (on the ground floor in the west wing).

- A chimnay with a gallows with 3 cruiks at it. An iron baik. A pair of lying raxes (andirons). 2 speits with horls at the end of them (the end bent over). 2 irons above the braise (chimney-piece; in this instance a stone arch) for laying speits on. Ane Jack (roasting-jack). 2 iron chayns for the jack. A salt barrell. A salt bucket. A draping (probably dripping) pan with a standing brander (gridiron) to set it on. A pair of taings. A handle for the jack. 2 brass pots & an iron pot. Ane iron pot for pick (pitch). 2 pair pot clips (hooks). 3 brazen pot lids. 3 brass pans. 3 iron ladles. A flesh crook. 13 peuther plaits & an eg plaite with a salt (salt-cellar) in it. These plaits are in the compt of the peuther in the press in the Woman-house. 2 Ambries with a faulding lang setle (a wooden bench). A calve (chaff) bed. A feather bouster. 2 pair of bed plaids. Ane f. 23. old grein rug. A Scots covering unlyned rid & yellow. A seed box with a cover. A chappin knyfe. A timber plait. A kitchin table with a firme (form). 2 water stoups. Ane bucket. 2 clogs. A felling aix. A graitir of whyte iron. 2 frything (frying) pans. 2 branders. A fire shooll. A coall ridle. A hand barrow. 2 large capper kettles. A water stand with 3 iron girrs (hoops), & 2 iron handles. A sloped hand barrell. 4 dozen timber trenshers. A pair of hinging raxes.

In the Pantrie (on the ground floor in the west wing).

A dozen of silver spoons of the silver spoons that are in the press in the dyning rounge. The meikle silver spoon belonging to the said press. The great 2 lugged silver quech belonging to the said press. The great silver salt fat belonging to the said press. The most of the silver salt fatts

- belonging to the said press. A silver brandie dish. A silver sugar box with a large spoon. A mustard silver dish with a spoon therein. The silver pepper caster, all belonging to the said press. 11 elephant hefted (ivory handled) knyves with a fork. 4 brass candlesticks belonging to the press. Ane iron hand candlestick. A hinging iron candlestick. 8 peuther trenchers belonging to the press in the Womanhouse. A
- f. 24. peuther flagan stoup. A Scots peuther pynt stoup. A peuther Scots chapin stoup. A Scots peuther mutchkin stoup. 2 silver cups. Ane English peuther chapin stoup. Ane English peuther mutchkin stoup. A large new trencher wand basket. A lesser new trencher wand basket. A firr table. A narrow firr furme. A broad furme of firr. 2 ambries with broads. A skelve. A brass mortar. 2 timber mutchkin stoups. 3 timber choppin stoups. 4 timber pynt stoups. A water stoup with iron girrs. A timber codwair (meaning not known). The Pantrie skelfed about with timber skelfs. A timber beis skep. Ane old bird caidge. 2 little ambries with broads on them. A lame can. A timber box. A beis skep. A groat (shelled oats) box. A tailyours guise & elwand.

In the Cellar (on the ground floor in the west wing).

- A baik with broads of timber. A large lantrone (lantern). A timber troch with a cover. An iron creiper (rod with hook at end of it). A hag stock (chopping block). A chappin knyfe. 2 pair gantries (gantresses). A naill box with some nails therein. 2 heilding tries (sloping ale-barrel). 2 wyne terces & a wyne hogshead. 4 thrie gallon tries. A ten pynt trie.
- f. 25. 2 nyne gallon tries. 3 fyve gallon tries. 2 timber stands. Some cocks & paills.

In the Wyne Cellar (on the ground floor of the west wing).

- 2 ten pynt brandie barrells. A brandie terce. 2 whyte iron fillers. 2 iron gemlets. A gantries. A chappin & mutchkine bottle of glass.

In the Laidner (on the ground floor of the west wing).

- A gantries. A candlechist. 3 beif stands. A lesser beif stand. 7 lids for them of timber. Above the laidner door a tirlies. 3 herring barrells. A butter barrell. A vinegar barrell. 2 stone bottells. 2 stone oyll bottells. 5 glass pynt bottells. 5 glass chappin bottells. Ane old whyte iron filler.

In the Court Stable.

- A short lether (ladder). A horse comb & a brush. 2 beds. A corne skep. 2 pair of bed plaids. A Scots covering. A feather boustier. Heck & manger & trivies compleat. Ane iron candlestick. A skelfe for holding horse graith. Ane iron graipe. Ane iron coall raick. Ane iron shooll.

f. 26.

In the Workhorse Stable.

A graip. A horse comb. 6 pair of sunks (cloth saddle stuffed with straw in which two persons can sit at once, or for pack horses). 8 kersadles (saddle of a carriage horse (for postilion)). 8 pair eyer lethers (blindern). A stone cairt belonging thereto. 2 pair of traces. 8 pair of branks (bridle with wood sides). Hecks, trevies & manger compleat. Ane iron candlestick. 2 timber ravells (rails) for hinging horse graith on. A catband (an iron bar fixed to the wall to keep half of the door shut) with a hinging lock. A timber skelfe for laying horse graith on. A girnell house off the end of the workhorse stable with 2 new girnells therein.

In the Byre.

12 set noult staicks. 2 graips. A rung borrow (hand-barrow). 2 hurle borrows (wheel-barrow). Some old timber trash (loppings of trees) lying above the byre chist. 2 cripies (milking stool).

In the Coall House.

An old iron shooll.

In the Hag House.

3 ledders. 6 harrows with iron teith. 6 trade widdies ("tredwiddy" = the chain that fastens the harrow to the swingle trees) thereto. A furnished horse plough. 9 furnished slaid. Several pieces of old timber in the haghous. A sloated (with cross bars) borrow, & a close (with sides) borrow.

In the Gairdners' Loft.

Severall old bird caidges. A short thrie footed ledder.

In the Dighting House Loft.

A large timber codwair (board on which the grain is threshed with a flail). Both East & West windows are tirlied with wayer.

In the Corne Barne.

A prooffe house (a part of the barn screened off for holding the grain of the first threshing to "prove" the crop). A large ledder.

In the Peis Barne.

f. 27. A timber girnell with a lock on it. 2 corne forks. 2 corne riddles. A wyde corne ridle. A whit rainge (wheat sieve). A beir (a kind of barley) ridle. 3 weights (a hoop with a skin stretched over it). Ane aikin (oak) plank.

A Draw well with the bucket & chayne thereto.

Belonging to the Washing House.

3 old washing tubs and ane new one. 2 hand laid gallons. A pair of iron taings. Ane iron lamp.

Belonging to the Yairds (Gardens).

4 Spaidis & a shooll. 4 raiks. 3 pairing irons. A pair of gairden sheirs. 8 weiding irons. A large hensch (one copy of inventory reads "hedge knife") knyfe. A gairden lyne. A mold iron (iron for breaking clods). A creiper for the ponds. 3 lifting irons (for digging up root crops). A wattering can. 2 way (wecht=shallow hoops 15 inches to 18 inches diameter over which a sheep or calf skin has been stretched) ridles. A tarr can. A syth. 2 watering pumps. A chist belonging to the pothouse. A moll trap. 3 dussen of iron pins. 16 lids for covering of holland pots. A gairdin hurle borrow with iron trams. A timber box f. 28. belonging thereto. 2 hammers. A litle snedding (pruning) knyfe. 2 knyves for imping (grafting). Ane saw. 2 gairdin books. 2 beis skeps. A grinstone in a timber frame with ane iron handell.

The douccat in the Yaird.

A hinging lock in it. A rowing stone (a stone roller) with an iron frame. A standing ladder. Another short ledder. 8 timber raiks.

In the Hen House.

2 cavies (coop). Several timber nests. The Easter window in the henhouse is stencheld & tirlid (netted). 2 watter troichs. A barrell for holding corne with a cover on it.

Four horses. 4 milk kyne. 2 koyes (queys). 30 ewes. 10 weathers.

All the doors within & without the house have pass locks on them which answeare to open with the pass kies. And all the presses & studies within the house answer to the litle pass kie.

All the windows in the house are haillie glassed & the storme windows also. There is not a rounge nor studie but there are hung doors on them with iron cruiks & bands.

The brew house windows are iron stenchels and an iron door with a hinging lock on the eastsyde of the oven.

The wester kitchin windows hes iron stenchells & tirlid and so are the windows in the cellar, laidner, pantrie & wyne cellar.

And the North windows in the laigh hall are also stenchelled & tirlid.

The North window & the easter window in his own chamber are also stencheld & tirlid.

The litle windows in the 2 turnepyks (a stair of spiral form) are also stenchelled.

INVENTORY OF PLENISHING OF HOUSE OF BINNS. 309

As for the yaird dykes, Park dykes, & hill dykes they are all bigged with stone & lyme & haillie up.

And all the barren timber which is planted within the dykes & without dykes is all growing.

There is ane great nurserie lying to the west of the barne yaird wherein is ash, plain, fir tries &c.

In the doucat yaird & foir yaird is great nurseries of ash, plain & uther sort of barren timber.

Dec. 16, 1689.

	£	s.	d.
The Deining rume is	0155	06	8
The presses in the deining rume is	119	00	00
His owne Chamber is forby the Bibliotak	220	00	00
In the sadell hous	082	00	00
In the laich hall	082	11	00
The High halle	191	00	00
The Chamber of Desse	589	10	10
The Vault Chamber hung with gilded hingings	400	00	00
The Stone Studdie with the trunks &c.	600	00	00
The green Chamber	400	00	00
The Stone Chamber	78	00	00
In the Wardrop Chambers	10	00	00
In the Easter Wardrope Chamber	35	00	00
In the South Chamber	52	10	00
In the Kitchen Chamber	124	00	00
In the Red Room	41	16	00
In the little study in that room	7	13	6
In the Milkhouse Chamber	34	00	00
In the Woman House	35	05	00
In the Milkhouse	11	19	00
In the presses in the Woman house the Peuther, etc.	106	00	00
In the Corn girnell house	2	10	00
In the Girnell house	54	08	00
In the North Chamber wherein the Servants leies	15	00	00
In the South Room wherein the men leies	15	00	00
In the brew house chamber	31	00	00
In the Stable chamber foreanent the brew house chamber	11	00	00
In the Gallarie	40	00	00
In the Laigh Stone Roume	06	00	00
In the brew house	51	15	00
In the Kitchen	95	6	00
In the Pantry	14	1	00
In the Seller	14	00	00
In the Weine seller	2	10	00
In the ledner	7	18	00
In the Court Stabell	8	00	00
In the work horse stabell	19	14	00
Ane Girnell house & new Girnells	20	00	00
In the Byer	03	03	00
In the Coal house, ane shele	00	06	00
In the hag house	29	00	00
In the Gairdners loft	01	00	00
		24	

	£	s.	d.
In the Corne barne	3	00	00
In the Dichting house loft	0	10	00
In the Pies barne	5	12	00
In the Draw Well	7	00	00
Belonging to the washing house	2	10	00
Belonging to the yairdes	37	00	00
In the Duket in the yaird	02	00	00
In the Hen house	1	10	00
Four horses	180	00	00
Foure Kaie	096	00	00
Twa queies	20	00	00
Thretie youes	45	00	00
Ten wathers	20	00	00
	4237	05	00 ¹

SUPPLEMENTARY NOTE TO THE EXCAVATION OF COULL CASTLE,
p. 49. By W. DOUGLAS SIMPSON.

In *Flores Historiarum*, ed. H. R. Luard, vol. iii. pp. 133-4, the fate of Sir Herbert de Morham is related. Described as *vir cunctis Scotis formosior et statura eminentior*, he is alleged to have thrice played traitor to the English king. Having twice been pardoned, on the third occasion when captured he was lodged with his father and squire under irons in the Tower. Thence he sent a message to King Edward offering his own head on the day when Sir Simon Fraser should be taken: "for the Scots nobles lying in prison used to say that Sir Simon was invincible and not to be captured, and that so long as he lived Scotland would never be conquered." Fraser having been caught was cast into the Tower, and on the day following (September 7, 1306) Sir Herbert de Morham and his squire, Thomas de Boys, were led forth to the block.

Morham is the smallest parish in East Lothian. Its lords were descended from a family named Malherbe, who are found in possession of the manor under William the Lyon, and took the name de Morham from their estate—G. Chalmers, *Caledonia*, ed. 1889, vol. iv. p. 537, with authorities cited. In the old *Statistical Account*, 1792, vol. ii. p. 334, it is stated that the Castle of Morham stood on an eminence near the church, and was "of considerable magnitude and strength," but at that date all masonry had disappeared. Chalmers, *op. cit.*, says that "the patronage of the church has always belonged to the lord of the manor." We have here a distinct case, as at Coull, of a parish formed out of the manor of an immigrant Norman baron, its castle and church standing side by side as the civil and ecclesiastical centres of the parish.

¹ Scots Money.

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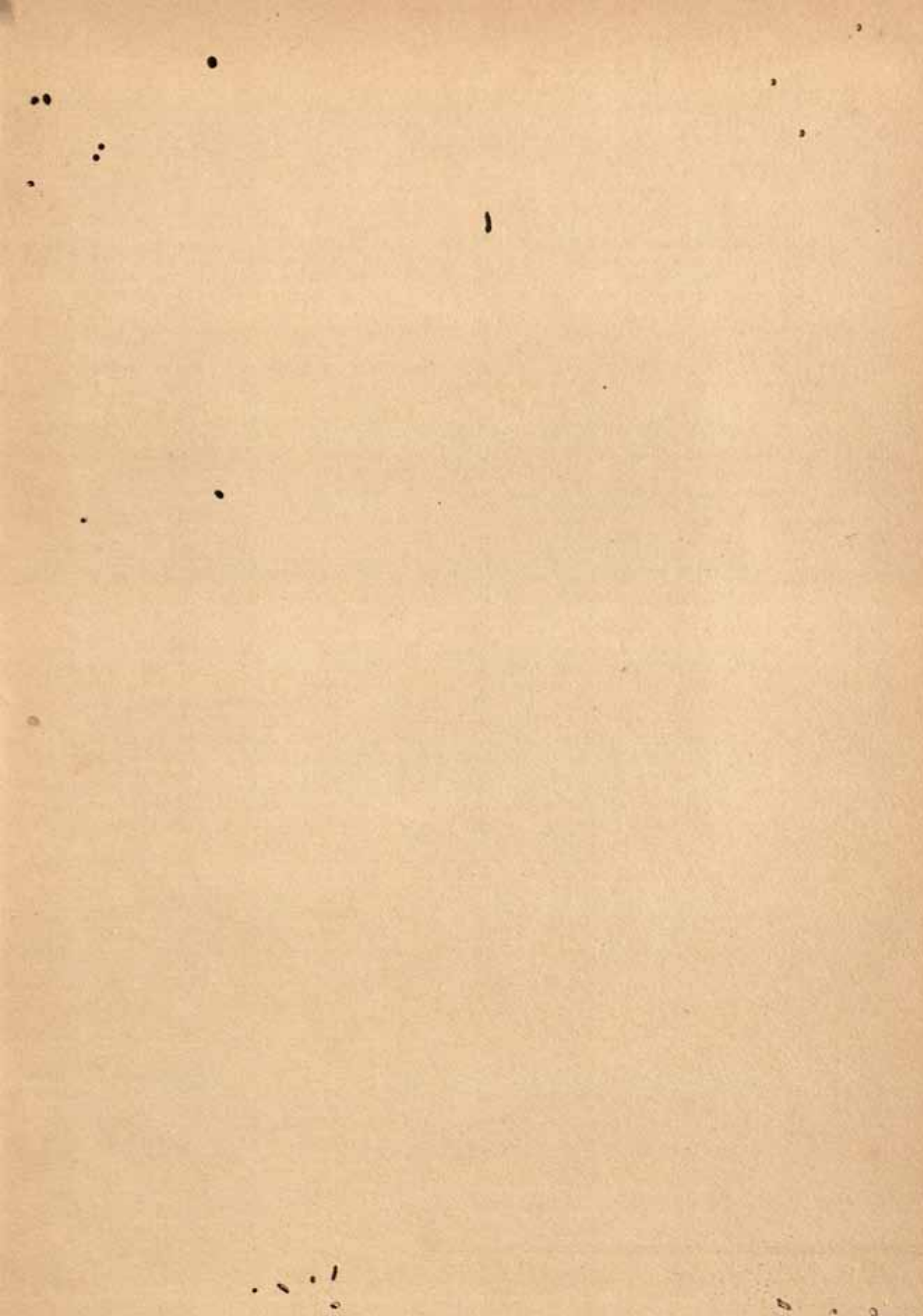
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